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FACSIMILE TRANSMITTAL SHEET

TO: Roger Jones, Publications	FROM: John P. Iwanicki
COMPANY: U.S. Patent and Trademark Office	DATE: July 28, 2005
FAX NO.: (703) 746-4633	TOTAL NO. OF PAGES: (including cover sheet) 33
YOUR REFERENCE NO.:	OUR REFERENCE (C/M) NO.: 03848-85586
RE: <u>USSN 09/498,554, Filed February 4, 2000</u> <u>"Combinatorial Strategies for Polymer Synthesis," James L. Winkler et al.</u>	
<i>If you do not receive all page(s) or have any problems receiving this transmission, please call:</i>	
NAME: Sender	PHONE: (617) 720-9600
COMMENTS:	

Per your request, I am attaching the formal drawings as filed on May 16, 2000 in the above-referenced application. Also attached are the Transmittal of Formal Drawings; a copy of the returned postcard from the same; 3 pages printed from the PAIR Image File Wrapper showing that the work flow query regarding the drawings was satisfied, marked "done" by PTO agent "OP" and closed; our Request for Expedited Issuance filed April 13, 2005; a memo to file regarding the status of the application; and a log of phone calls made to the PTO regarding the same. No color drawings or color photographs have ever been submitted in this application.

KINDLY ACKNOWLEDGE RECEIPT OF THIS TRANSMISSION BY RETURN FACSIMILE.

I hereby certify that this correspondence is being submitted by facsimile addressed to: fax no. (703) 746-4633, Roger Jones, USPTO Publications Branch, P.O. Box 1450, Alexandria, VA 22313-1450, on

July 28, 2005
Date
Laurie Hall
Laurie Hall

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BOSTON

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Assistant Commissioner for Patents

Assistant Commissioner for Patents
Washington, D.C. 20231

Applicants: James L. Winkler et al.

USSN: 09/498,554

Title: COMBINATORIAL STRATEGIES FOR POLYMER SYNTHESIS

Atty. JPIWank
Docket No. 03848-85586
Filed: February 2, 2000
THE BAY'S FUND
PARTNERSHIP

The following has been received in the U.S. Patent and Trademark Office on the date stamped hereon:

☒ Transmittal Letter 2 pages
☐ Specification pages:
☐ claims, independent claim; abstract
☒ Drawings [X] formal [] informal 21 sheets
☐ IDS pages, PTO-1449 pages, references
☐ Copy of signed Declaration & POA pages
☐ Small Entity Statement pages
☐ Assignment with recordation cover sheet
☐ Filing Fee
☒ Other Substitute Fig. 13a showing corrections in red; Transmittal of Federal Drawings

 Amendment/Response pages
 Petition for Extension (month)
☒ Preliminary Amendment 16 pages
 Request for Corr. Filing Receipt
 Issue Fee (w/ PTOL-85B)
 Advance Order of copies
 CPA Request
 Notice of Appeal & Fee
 Response to Missing Parts

Fee Enclosed: \$1,518.00

Debit Deposit Acct. No. 19-333 for

Exp. Mail Receipt No. EL572693150US

Mailed: 5/16/2000 Client: Affymatrix, Inc.

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BANNER & WITCOFF, L.T.

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ATTENT
ATTORNEY DOCKET NO. 03818-85586

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

James L. Winkler, Stephen P.A. Fodor,
Christopher J. Buchko, Debra A. Ross,
Lois Aldwin, and Douglas N. Modlin

Examiner:

Serial No.: 09/498,554

Art Unit:

Filed: February 4, 2000

Title: COMBINATORIAL STRATEGIES
FOR POLYMER SYNTHESIS

Assistant Commissioner for Patents
Washington, D.C. 20231
Attention: Official Draftsman

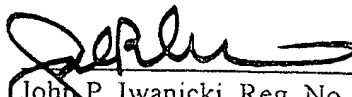
TRANSMITTAL OF FORMAL DRAWINGS

Please substitute the enclosed twenty-one (21) sheets of formal drawings for the corresponding drawings presently in the application. An additional copy of Figure 13a is being submitted showing corrections highlighted in red.

Please apply any other charges or credits to our Deposit Account No. 19-0733.

Respectfully submitted,

Dated: May 16, 2000


John P. Iwanicki, Reg. No. 34,628
Banner & Witcoff, Ltd.
28 State Street, 28th Floor
Boston, MA 02109
(617) 227-7111

USSN 09/498,554

Express Mail Receipt EL572693150US

1

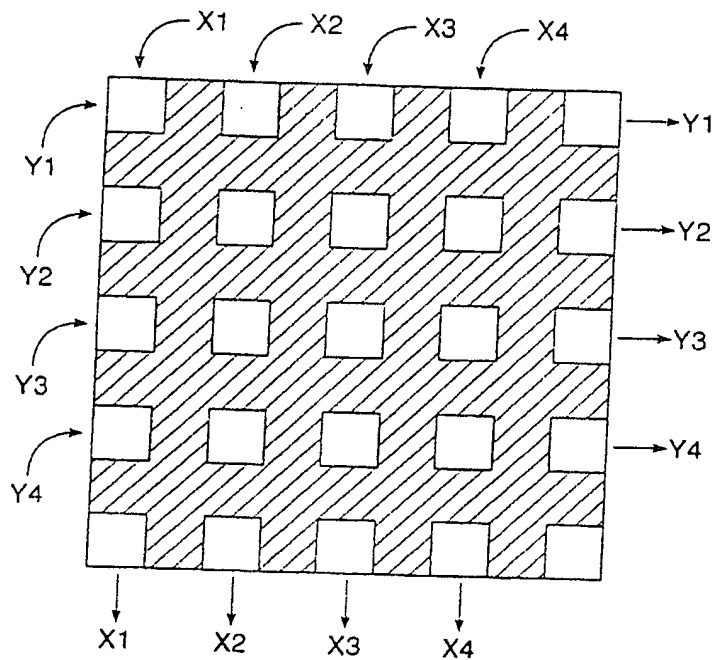


FIG. 1

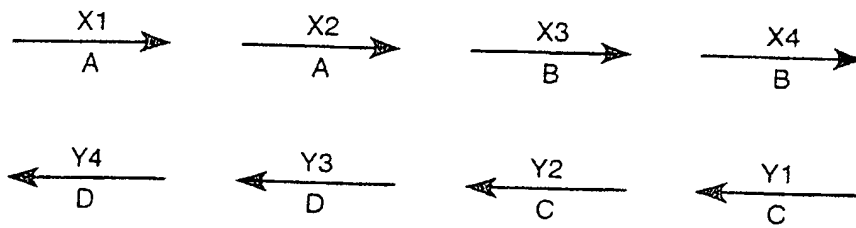


FIG. 2

A	A	B	B			
AD	D	AD	D	BD	D	BD
A		A		B		B
AD	D	AD	D	BD	D	BD
A		A		B		B
AC	C	AC	C	BC	C	BC
A		A		B		B
AC	C	AC	C	BC	C	BC

FIG. 3

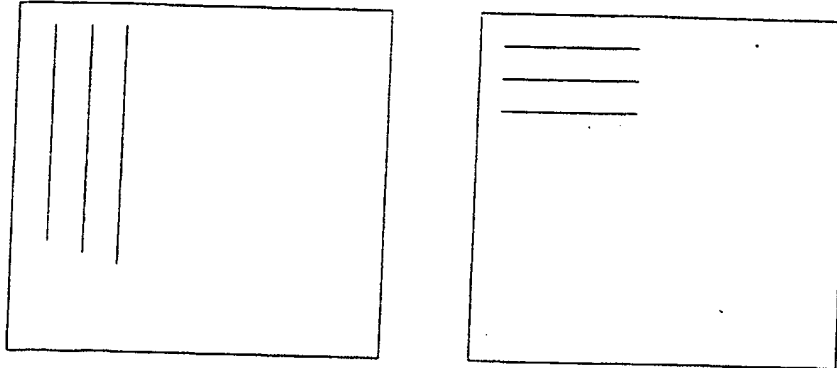


FIG. 4A

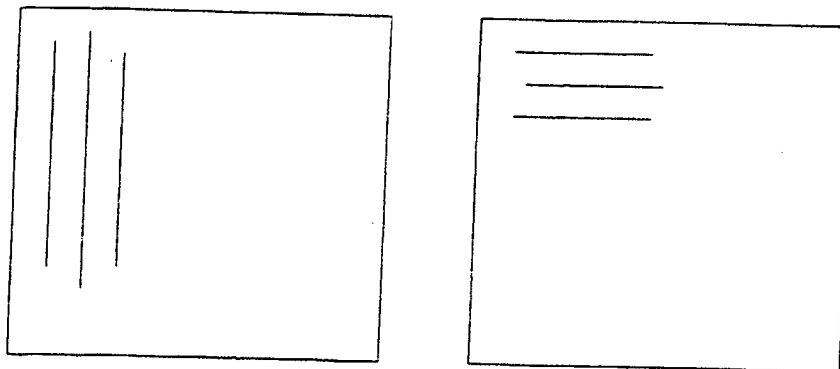


FIG. 4B

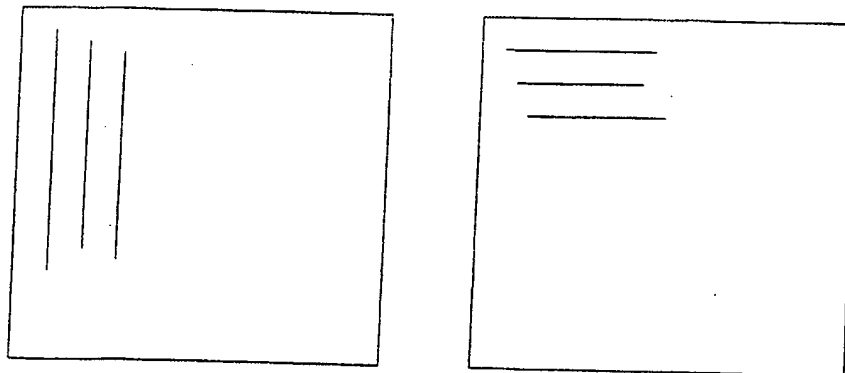


FIG. 4C

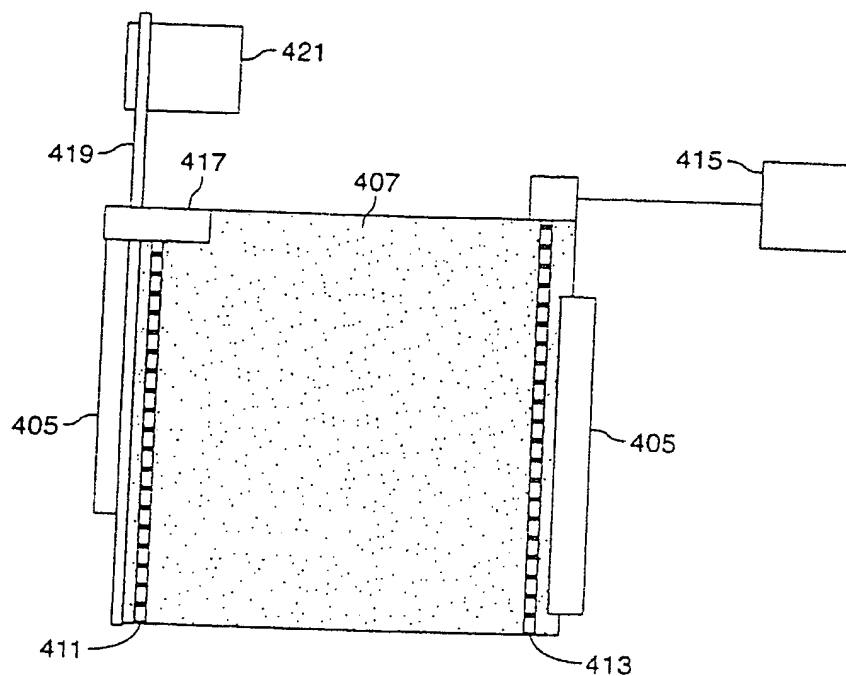


FIG. 5A

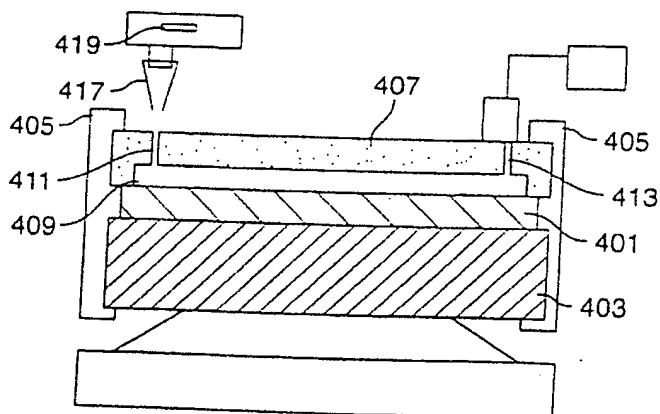


FIG. 5B

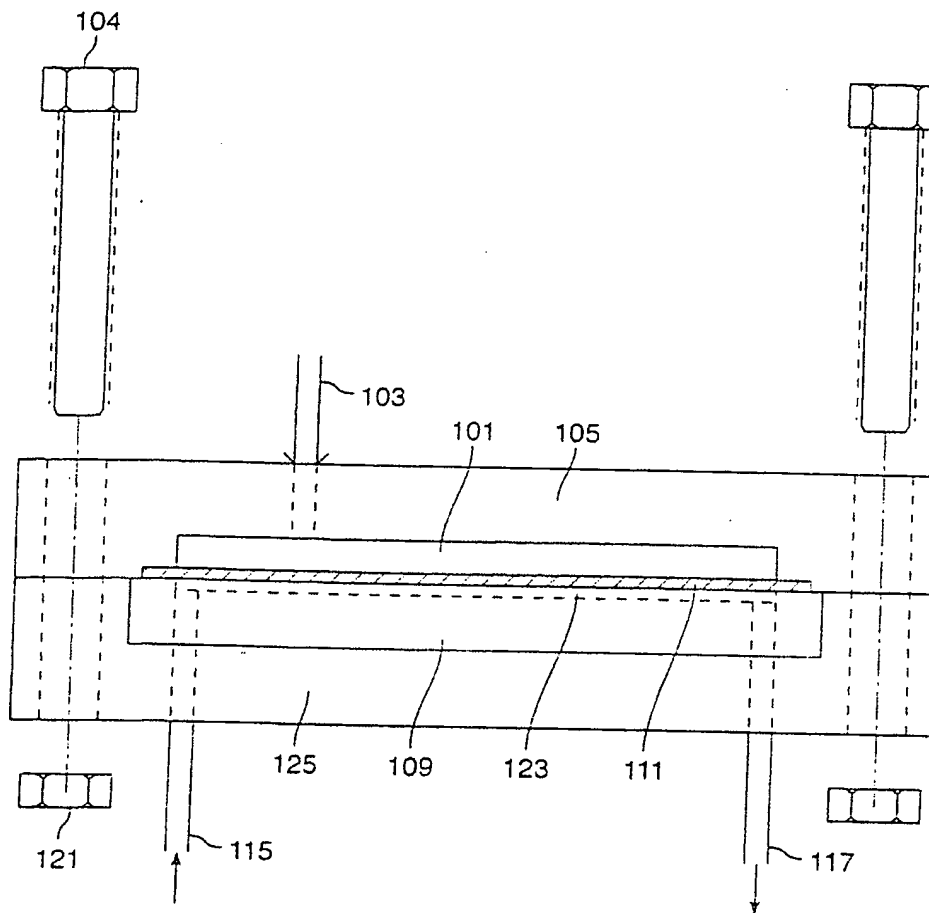


FIG. 6

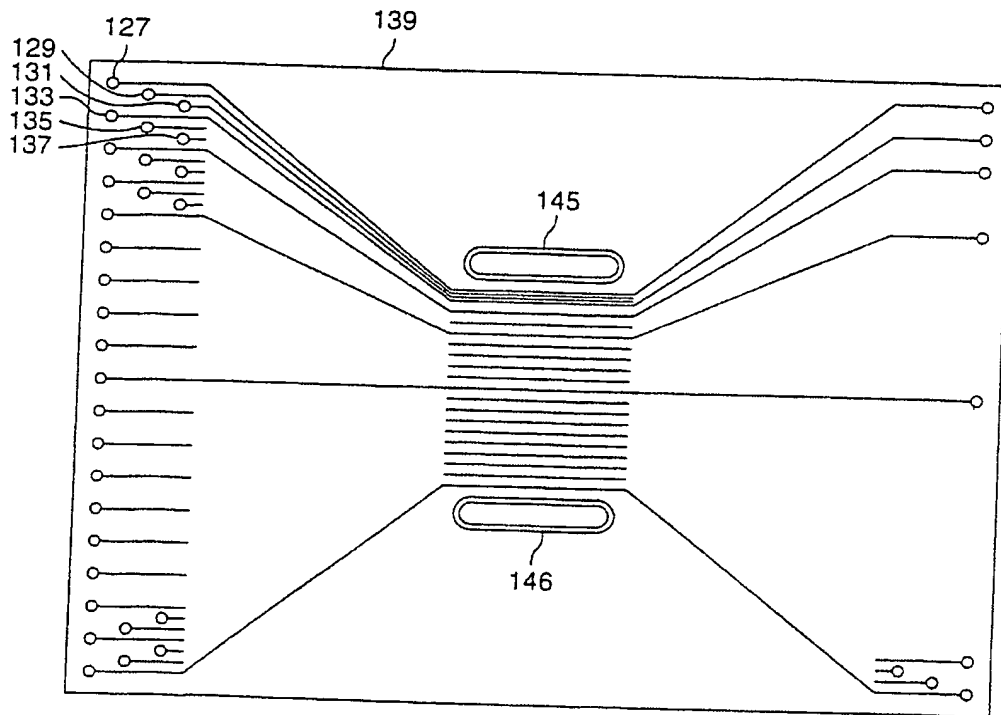


FIG. 7A

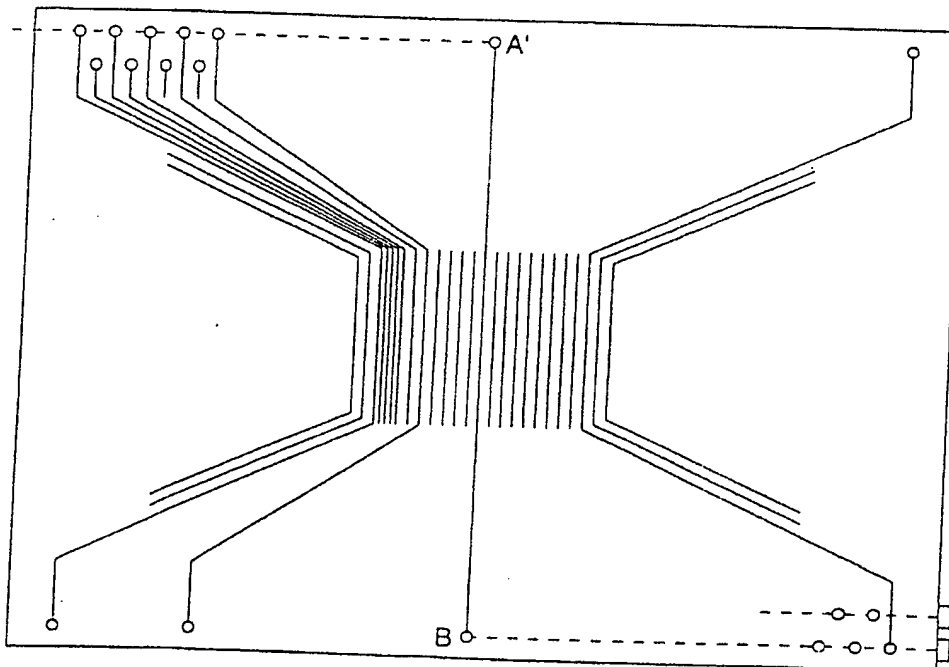


FIG. 7B

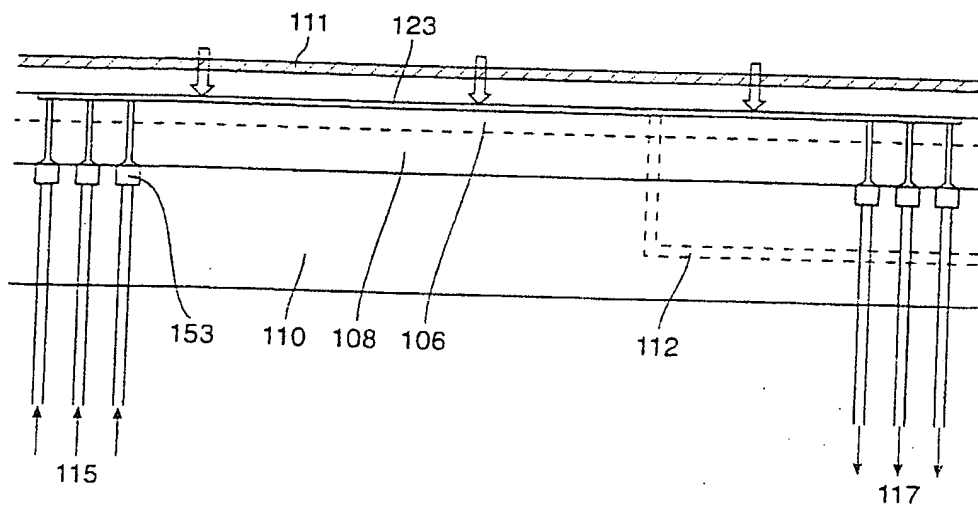


FIG. 8

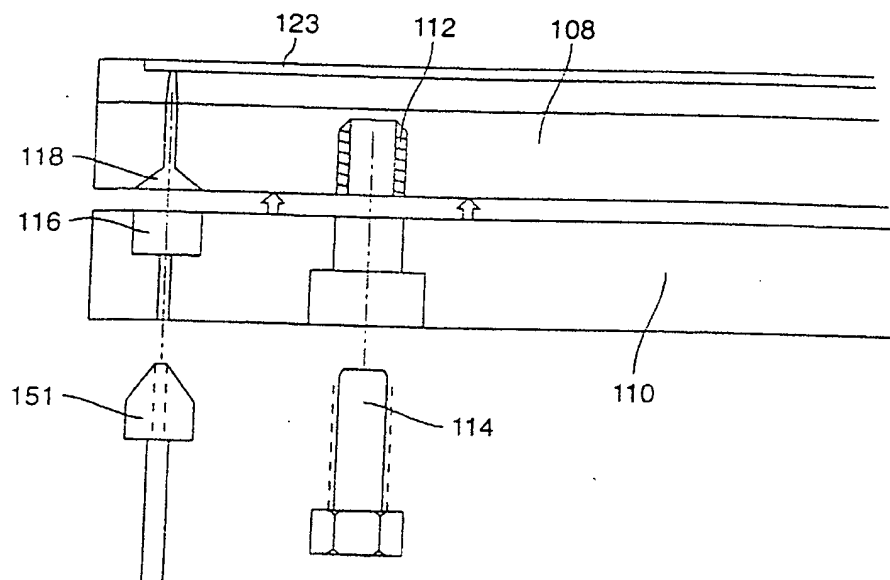


FIG. 9

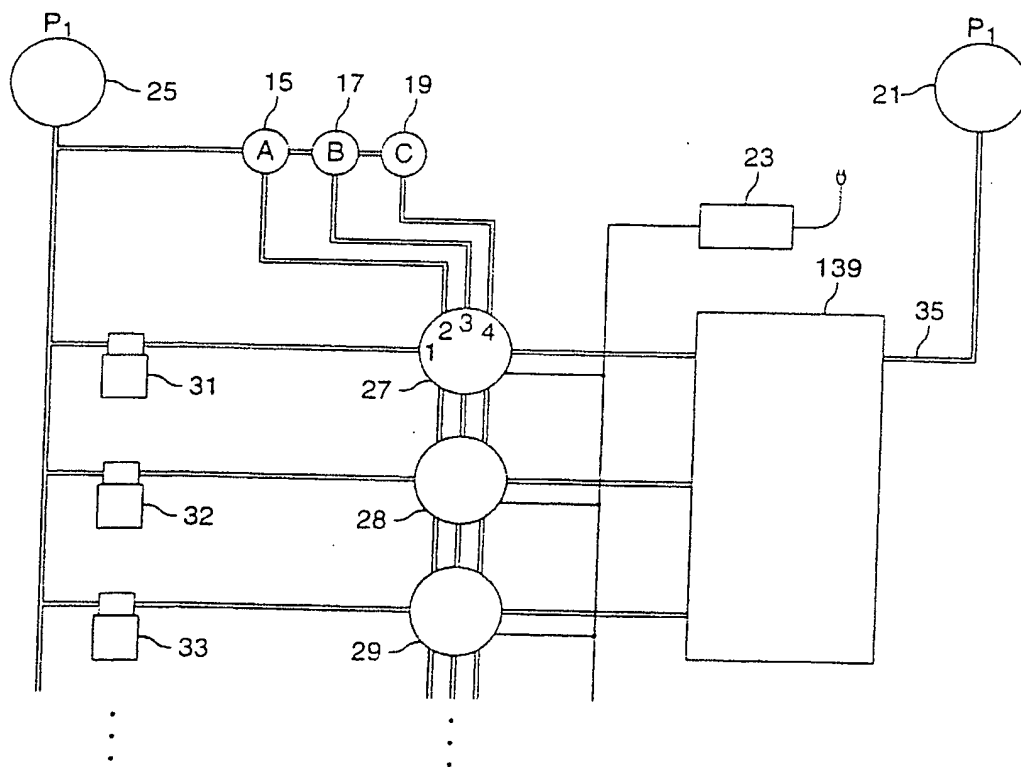


FIG. 10

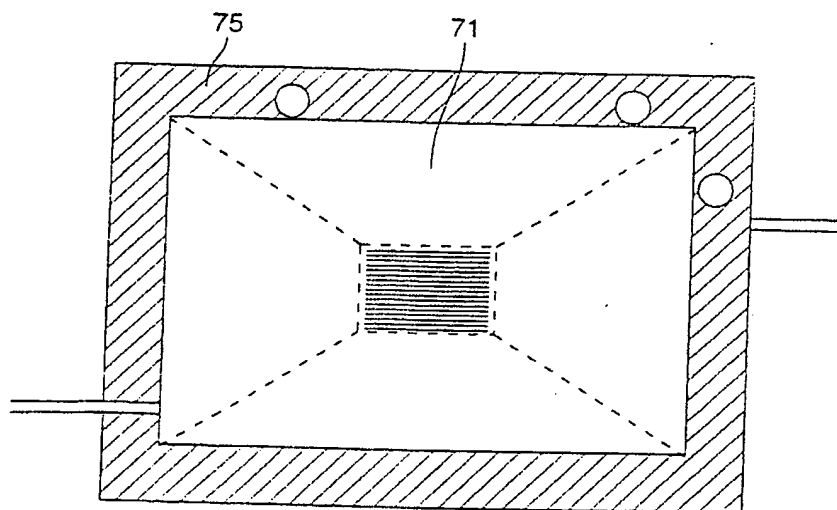


FIG. 11A

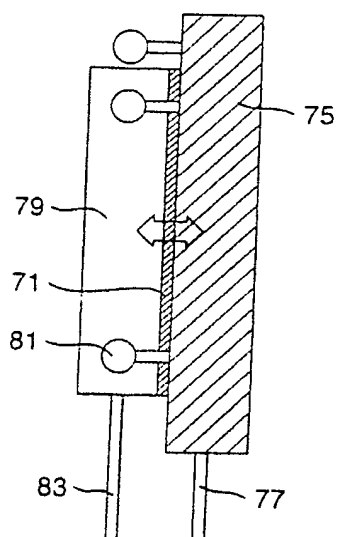


FIG. 11B

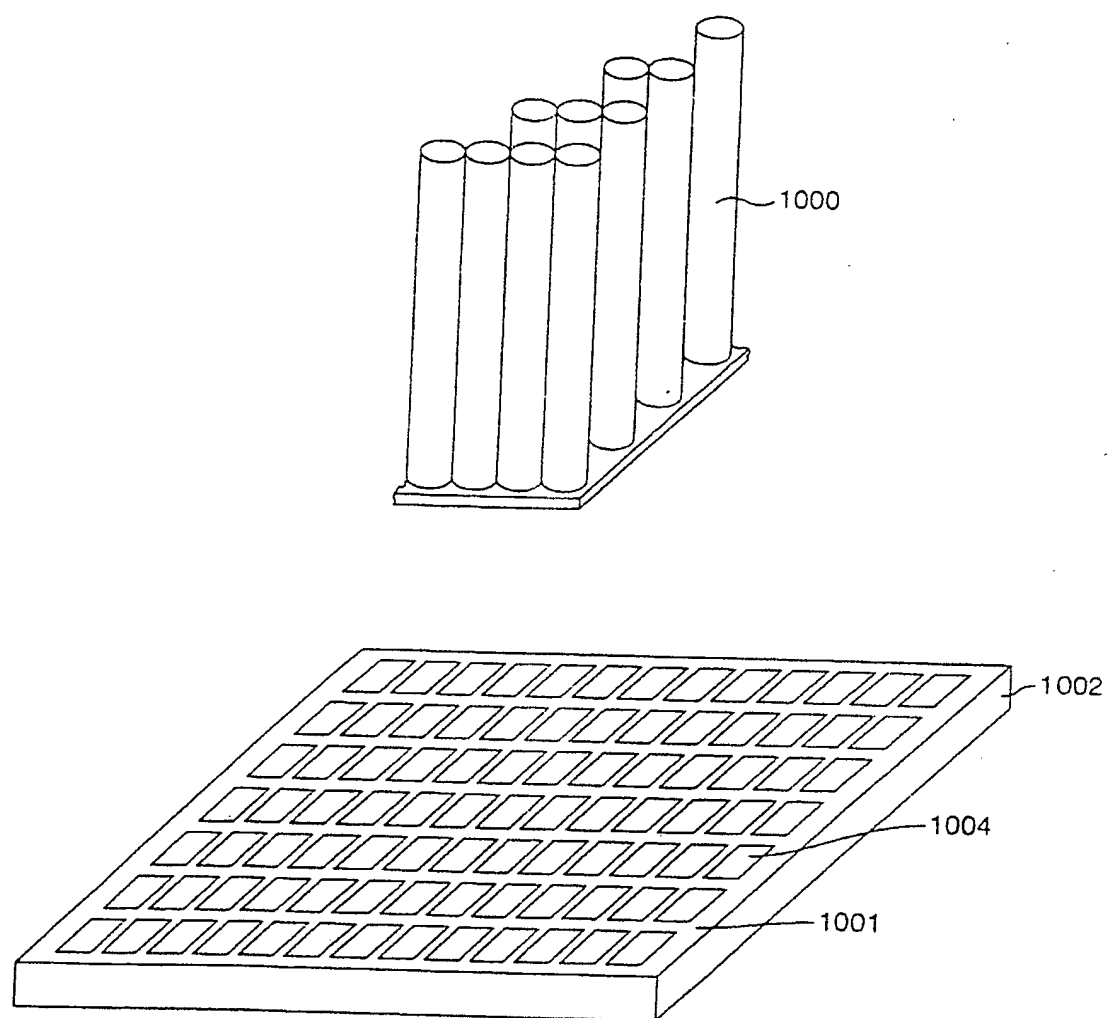


FIG. 12

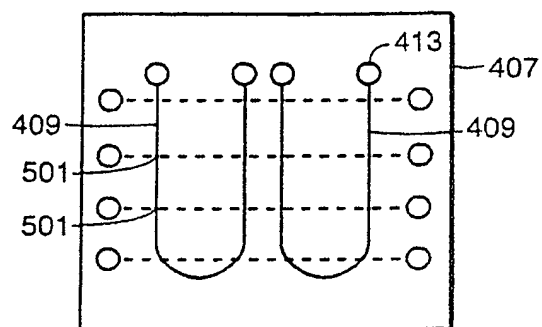


FIG. 13A

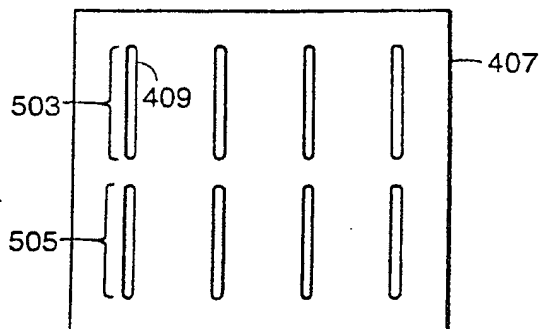
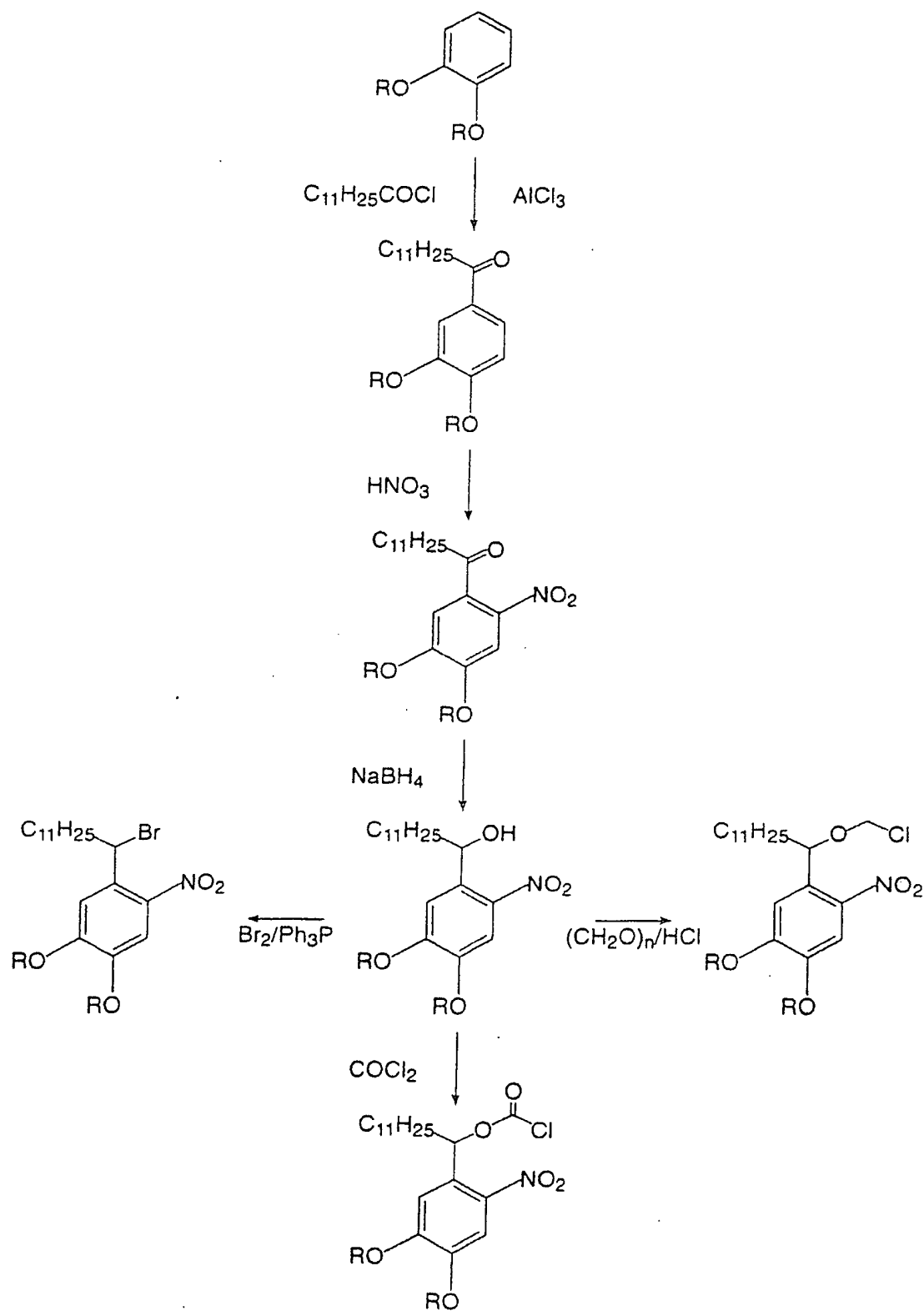


FIG. 13B



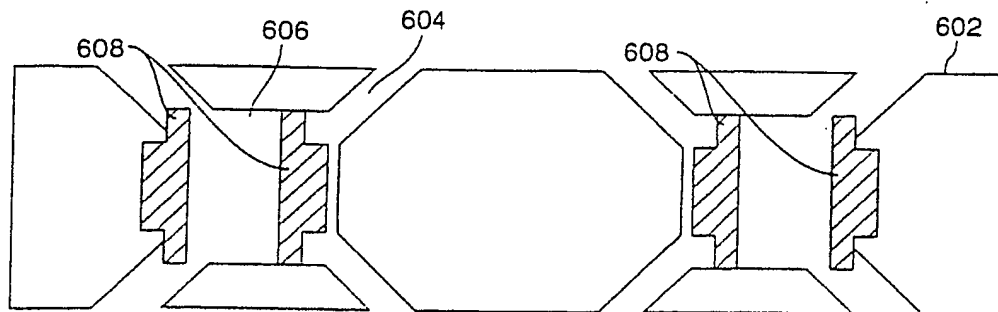


FIG. 15A

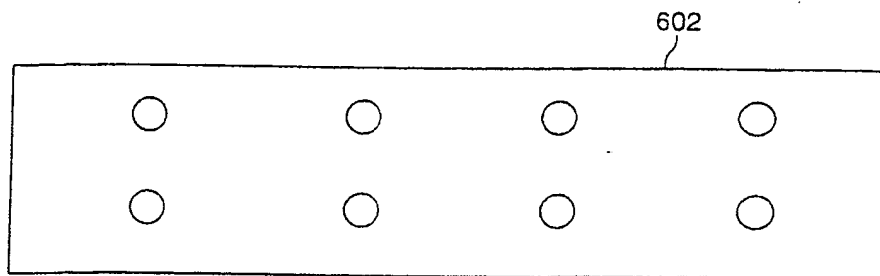


FIG. 15B

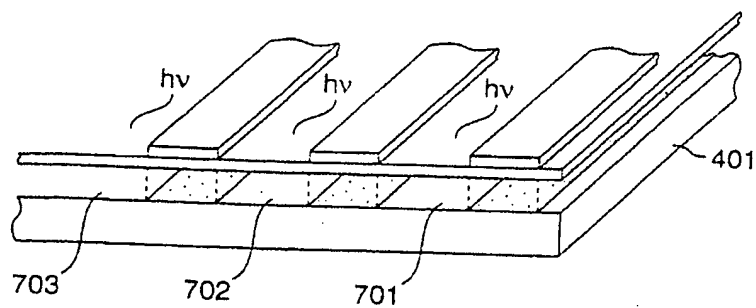


FIG. 16A

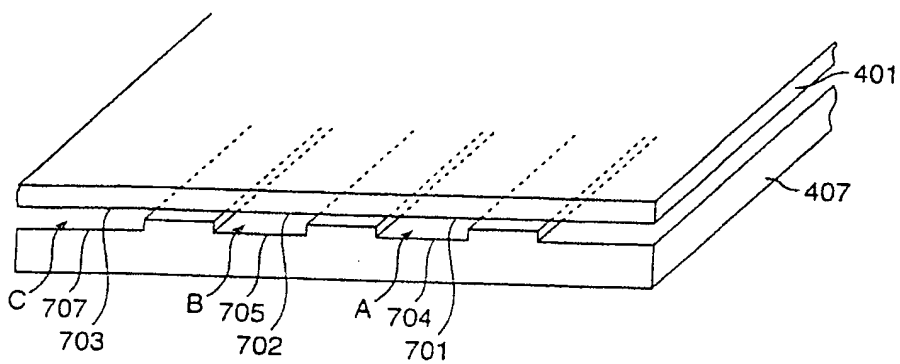


FIG. 16B

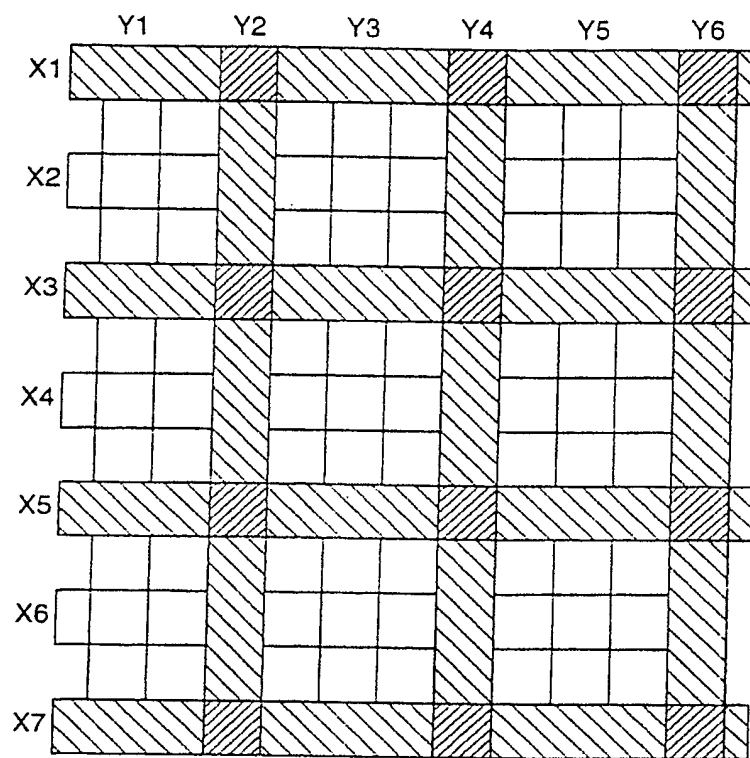


FIG. 17

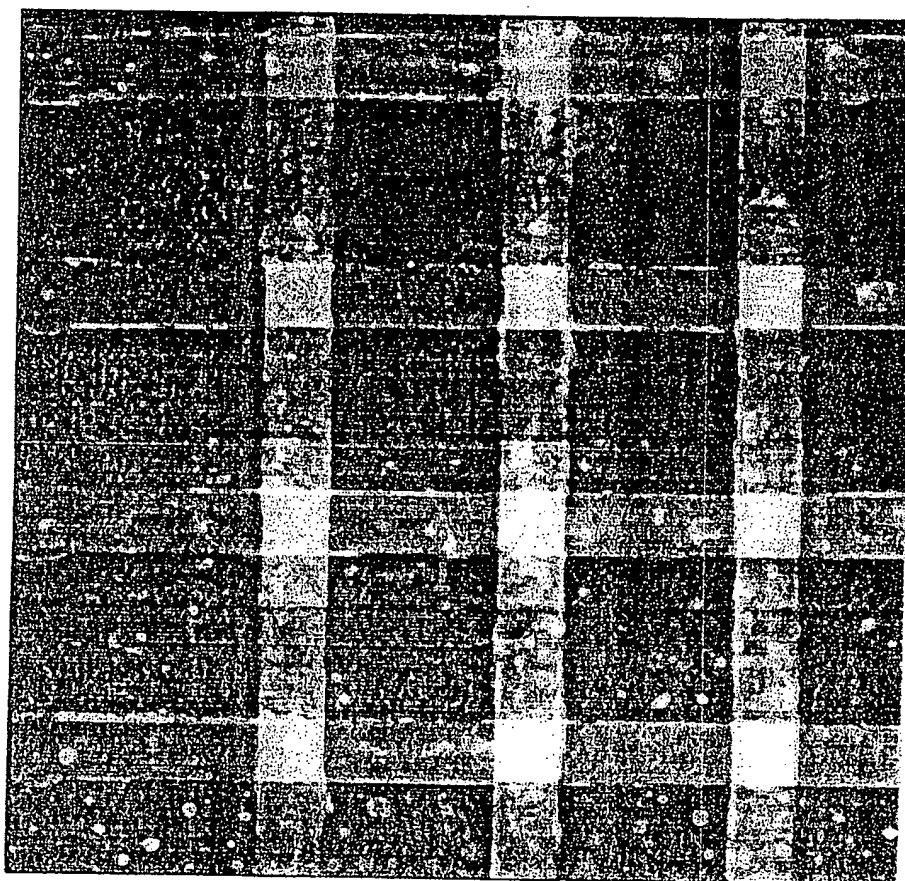


FIG. 18

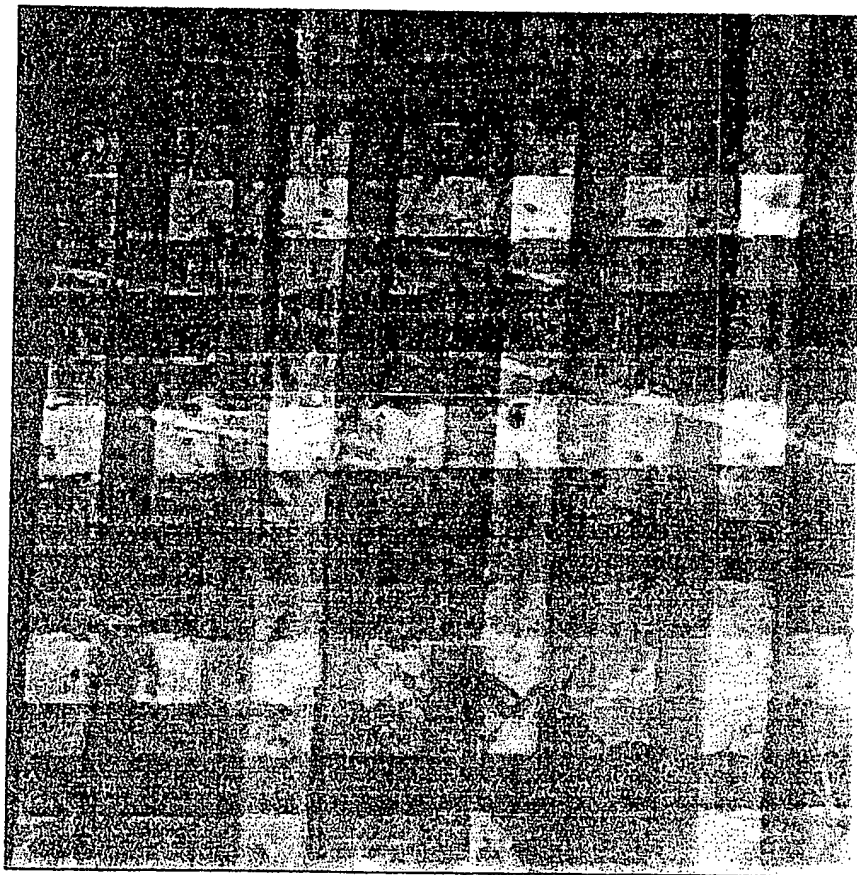


FIG. 19

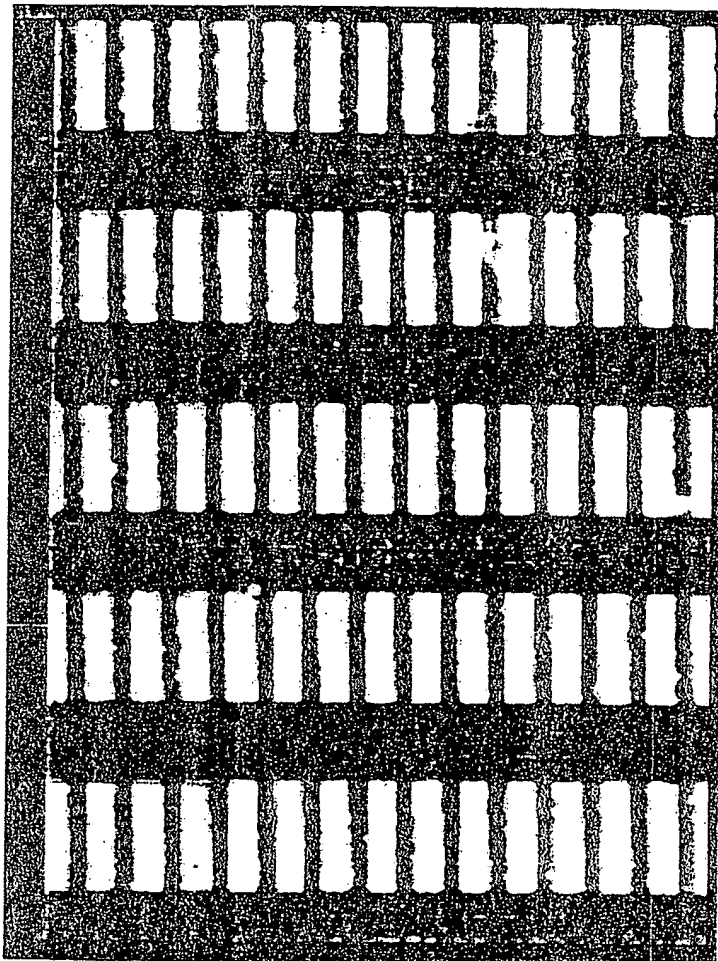


FIG. 20

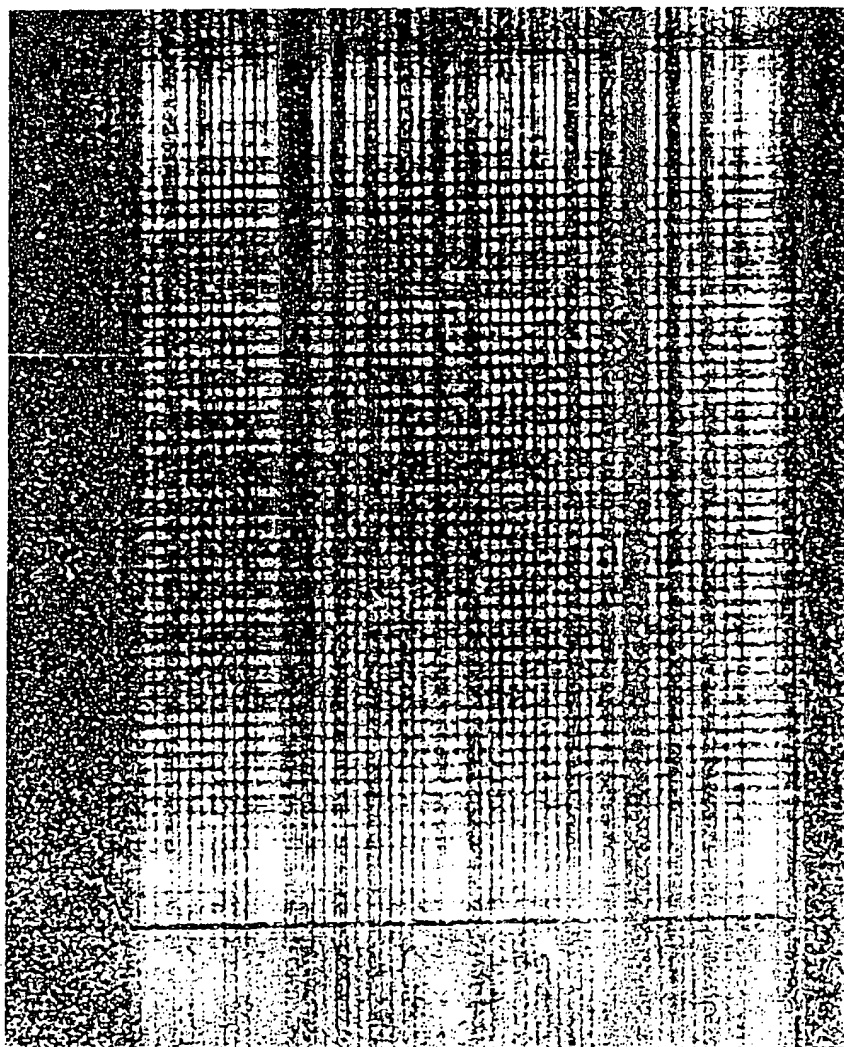


FIG. 21

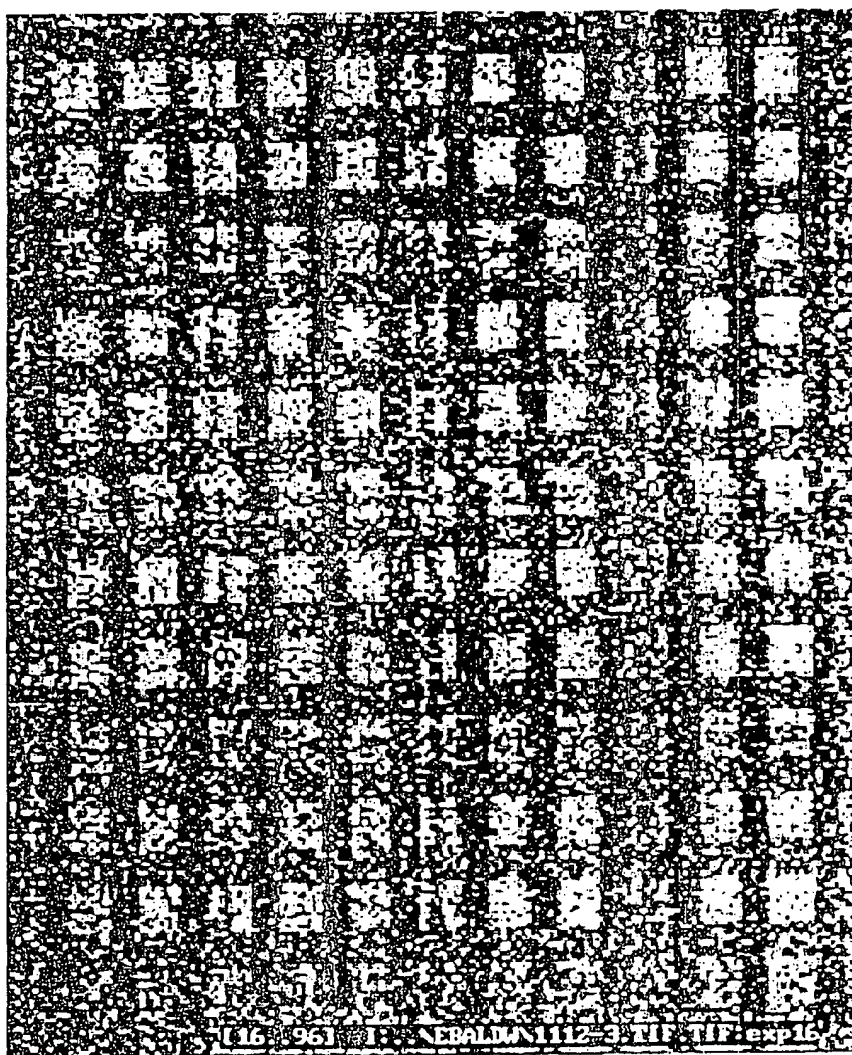


FIG. 22



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MEMORANDUM ¹

To: File
From: Laurie Hall
Date: December 1, 2004
Re: 03848-85586

I spoke to Terry Dyson today in Publications who said the file is still in IDC (Initial Data Capture). She is placing the application in special handling and will contact the contractors to try to expedite. She advised us to call back in 2-3 weeks for the status and mentioned that they're backed up on a lot of applications.

I then checked PAIR and discovered a Query Control Form, dated 8/19/04 and signed by "ewc" stating that there were color drawings and that he/she did not find the required mention in the specification. There was also an Artifact Sheet under a heading mentioned that some items could not be scanned which referred to stapled set(s) of extra color drawings/photographs.

I called Jill Warden who found the same documents. I told her there were no color drawings, but there were B&W photographs. Jill said that the Query Control Form was marked "[one]" at the bottom so this issue was completed and *shouldn't* be the reason the application is being held from publication.

She suggested we speak to someone higher up and gave me the names of Dick Brucomb, the Director of Publications, and Deborah Stephens, who works with him, (703) 305-8263. Jill thought it would be better to contact Deborah.

¹ See attachments printed from PAIR.

PA-ID:

QUERY CONTROL FORM		RTIS USE ONLY	
Application No. <u>09 498554</u>	Prepared by <u>ewc</u>	Tracking Number <u>05 43812</u>	
Examiner-GAU <u>Ludlow</u>	Date <u>8/19/04</u>	Week Date <u>5-03-04</u>	
<u>1743</u>	No. of queries <u>- 1 -</u>	<u>IFW</u>	

JACKET			
a. Serial No.	f. Foreign Priority	k. Print Claim(s)	p. PTO-1449
b. Applicant(s)	g. Disclaimer	l. Print Fig.	q. PTOL-85b
c. Continuing Data	h. Microfiche Appendix	m. Searched Column	r. Abstract
d. PCT	i. Title	n. PTO-270/328	s. Sheets/Figs
e. Domestic Priority	j. Claims Allowed	o. PTO-892	t. Other

SPECIFICATION	MESSAGE
a. Page Missing	<p>There are color drawings for this file but the required paragraph is not printed at the beginning of the descriptions.</p> <p>Please advise</p> <p>Thank you</p> <p>ewc</p>
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j. Amendments	
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k. Other	<p>RESPONSE</p> <p><i>[Signature]</i></p> <p>This says "Done" per Jill Warden 12/01/04</p> <p>initial: <i>[Signature]</i></p>

E-5 (Rev. 10/01/02)

subsequently washed and prepared for reaction with a new set of monomers. Dimers, trimers, and larger polymers of controlled length and monomer sequence are prepared by repeating the above steps with different groupings of the reaction regions and monomer solutions.

5 In alternative embodiments, the polymers or other compounds of the array are delivered to the regions as complete species, and thus the above polymer synthesis steps are unnecessary.

In a preferred embodiment, a plurality of reaction regions on the substrate surface are surrounded by a constraining region such as a non-wetting region which hinders the transport of reactants between adjacent reaction regions. Thus, the reactants in one region cannot flow to other regions where they could contaminate the reaction. In certain preferred embodiments, the regions of the array are defined by selective irradiation of a substrate surface containing photolabile hydrophobic protecting groups. In areas where the surface is irradiated, the hydrophobic protecting groups are removed to define reaction regions. When an aqueous or other polar reactant solution is deposited in the reaction region, it will have a relatively large wetting angle with the substrate surface so that by adjusting the amount deposited, one can ensure no flow to adjacent regions.

A further understanding of the nature and advantages of the inventions herein may be realized by reference to the remaining portions of the specification and the attached drawings.

25

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a generalized diagram illustrating the invention;

Fig. 2 is a flow chart illustrating the treatment steps performed in synthesizing an array of various polymers;

Fig. 3 is a mapping of a resulting array of polymers;

Fig. 4a to 4c illustrate the arrangement of three channel block templates in six process steps employed to synthesize 64 million hexapeptides from a 20 amino acid basic set;

Fig. 5a is a top view and Fig. 5b is a cross-sectional view of a first embodiment of a device used to synthesize arrays of polymer sequences;

Fig. 6 is a cross-sectional view of an embodiment containing a pressure chamber for holding a substrate against a channel block;

Figs. 7a and 7b are top views of two of two different "fanned array" channel blocks;

Fig. 8 is a cross-sectional view of a channel block and associated flow ports according to one embodiment of the invention;

Please see copy attached.

or

ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc.. Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

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	03848-85586
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"Combinatorial Strategies for Polymer Synthesis," James L. Winkler et al.	
<i>If you do not receive all page(s) or have any problems receiving this transmission, please call:</i>	
NAME:	PHONE:
Sender	(617) 720-9600

COMMENTS:

Please see attached Applicants' Request for Expedited Issuance which is being submitted today in the above-referenced application.

Kindly acknowledge receipt of this transmission by return facsimile.

I hereby certify that this correspondence is being submitted by facsimile addressed to: fax no. (703) 746-4658, Commissioner for Patents, Attn: Kimberly Terrell, Publications Branch, P.O. Box 1450, Alexandria, VA 22313-1450, on

April 13, 2005

Date

Laurie Hall

Laurie Hall

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ATTORNEY DOCKET NO. 038 8-85586

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
James L. Winkler, Stephen P.A. Fodor,)	Confirmation No.: 8957
Christopher J. Buchko, Debra A. Ross,)	
Lois Aldwin, and Douglas N. Modlin)	Examiner:
)	Jan M. Ludlow
Serial No.: 09/498,554)	
)	Art Unit: 1743
Filed: February 4, 2000)	
)	
Title: COMBINATORIAL STRATEGIES FOR)	
POLYMER SYNTHESIS)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Kimberly Terrell, Assistant Manager
Publications Branch

REQUEST FOR EXPEDITED ISSUANCE

Applicants submitted a Response to Notice of Allowance and Issue Fee Transmittal on April 22, 2004. PAIR indicates that a "workflow query" was initiated and satisfied and that the application has been in IDC (Initial Data Capture) since September 21, 2004. Inquiries made with the Publications Branch revealed that the application was placed in "special handling" on January 3, 2005, but Applicants have not received further notification of the status of the application. USPTO Publications special handler, Cheryl McLeod, confirmed on April 11, 2005

I hereby certify that this correspondence is being submitted by
facsimile addressed to: fax no. (703) 746-4658, Commissioner for
Patents, Attn: Kimberly Terrell, Publications Branch, P.O. Box
1450, Alexandria, VA 22313-1450, on

April 13, 2005

Date

Laurie Hall

Laurie Hall

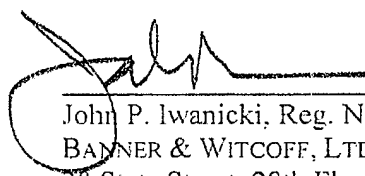
that she has received no response to her inquiries from the USPTO file depository contractor.

Accordingly, as nearly a year (356 days) has passed from the payment of the Issue Fee, Applicants respectfully request expedited processing of the above-referenced application to place it in condition for the issuance of the Letters Patent.

Respectfully submitted,

Dated:

April 13, 2005



John P. Iwanicki, Reg. No. 34,628
BANNER & WITCOFF, LTD.
28 State Street, 28th Floor
Boston, MA 02109
(617) 720-9600

04/13/2005 13:53 FAX

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"Combinatorial Strategies for Polymer Synthesis," James L. Winkler et al.

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(617) 720-9600

COMMENTS:

Please see attached Applicants' Request for Expedited Issuance which is being submitted today in the above-referenced application.

Kindly acknowledge receipt of this transmission by return facsimile.

I hereby certify that this correspondence is being submitted by
facsimile addressed to: fax no. (703) 746-4658, Commissioner for
Patents, Attn: Kimberly Terrell, Publications Branch, P.O. Box

Log of phone calls to PTO re: 09/498,554 (03848-85586), late issuance of patent.

1/05/05 Blanche Maye said it had been put in special handling 1/3/05 and to call back in a week to see if the file's been moved. Cheryl McLeod is the special handler and sent an e-mail to the contractor 1/4/05 about it and they're waiting for the contractor to respond. Contractor and file is in PA. She also noted that the question about alleged color photos had been satisfied and signed off on.

1/13/05 - Darlene Lyons said they hadn't heard from the contractor yet but give her or Blanche a call on Monday, 1/17/05, to check again. Darlene is going to try to see who's handling it and what the hold-up is.

1/18/05 - spoke to Blanche Maye again. The file still says it's in IDC (initial data capture) since 9/21/04. No answer yet from the contractor since the inquiry 1/06/05. Cheryl McLeod was handling - she's one of the specialists in the Pubs office next to Blanche's office 703-305-9064.

1/28/05 - spoke to Blanche Maye. Checked on 1/19/05 - status still the same. Told me to call Cheryl if I didn't hear soon.

2/23/05 - left msg. for Cheryl. Spoke to Blanche Maye and she will speak to Cheryl 2/24/05.

3/2/05 - spoke to Derrick Rich who said Cheryl was working on this and trying to get an answer from the contractor. Left a message for Cheryl same day.

4/12/05 - We never heard from Cheryl McLeod, the special handler. Spoke to Terry Dyson. Terry said we should fax Kimberly Terrell, the assistant manager of Publications (703) 746-4658 with a Request to Expedite as there's been no change since Sept. 2004. I asked her why no one had suggested this before even when I asked if I couldn't do this exact thing. She didn't know. It may be a timing issue because I asked about doing it on the 2 Harvard cases that are long overdue and she said I couldn't on them because they're in "special handling."

4/12/05 - (703) 308-9250 X153 - Cheryl McLeod called back. Blanche had given me the wrong no. (they moved a long time ago). She's going call the supervisor of the contractor. There was a query but it was finished. She's going to work on it and 10498-00028.

4/19/05 - Cheryl McLeod said it went in transit to FMF (final maintenance facility) 4/12/05. That's the 2nd step. It stays there 1 week or so, then goes to FDC and stays there about 4 weeks where it gets its issue date.

5/16/05: Darlene Lyon said it came out of IDC and went to FMF 4/12/05 as Cheryl had said, but it did not go on to FDC. She's sending Cheryl a reminder e-mail.

5/25/05: Left a message for Cheryl McLeod.

5/27/05: Cheryl said it went back into IDC 5/25/05, but she doesn't know why; thinks it's probably something that got missed being scanned. She's sending an e-mail to the offsite contractor who's handling it to find out and will get back to us.

6/16/05: Cheryl said it's still in IDC, but shouldn't be there for a long process. Should be out of there in 2-3 weeks, so give her a call in 2 weeks.

7/25/05: Cheryl said it should have been out of IDC 2 days ago (they're now there 8 weeks). She asked me to call her Friday, 7/29/05.

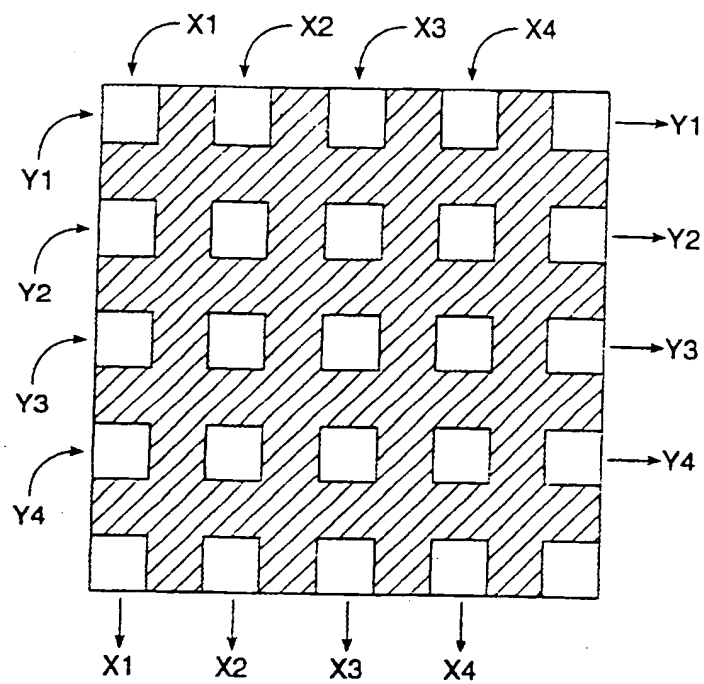


FIG. 1

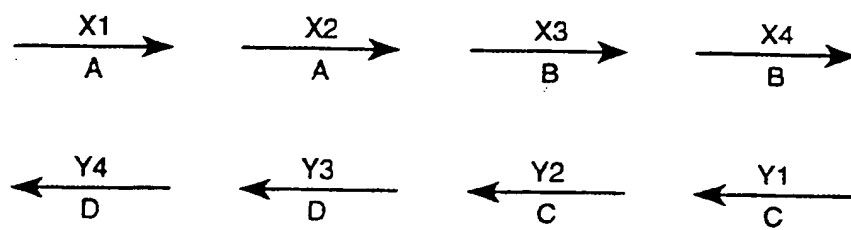


FIG. 2

A	A	B	B				
AD	D	AD	D	BD	D	BD	
A		A		B		B	
AD	D	AD	D	BD	D	BD	
A		A		B		B	
AC	C	AC	C	BC	C	BC	
A		A		B		B	
AC	C	AC	C	BC	C	BC	

FIG. 3

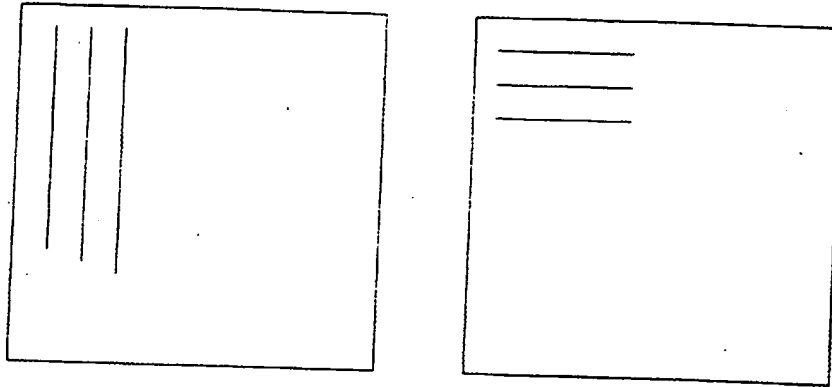


FIG. 4A

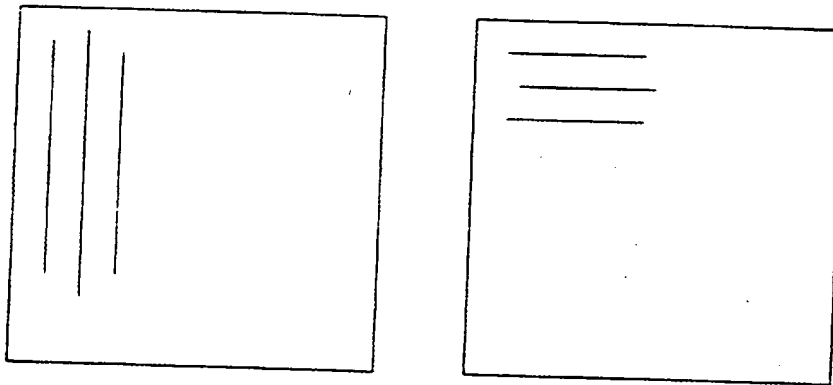


FIG. 4B

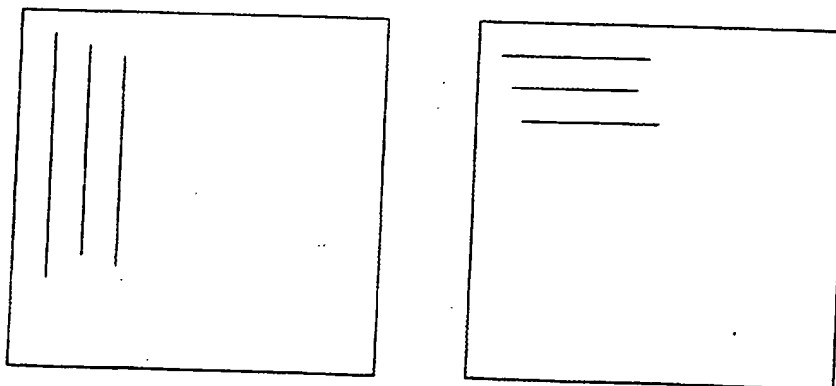


FIG. 4C

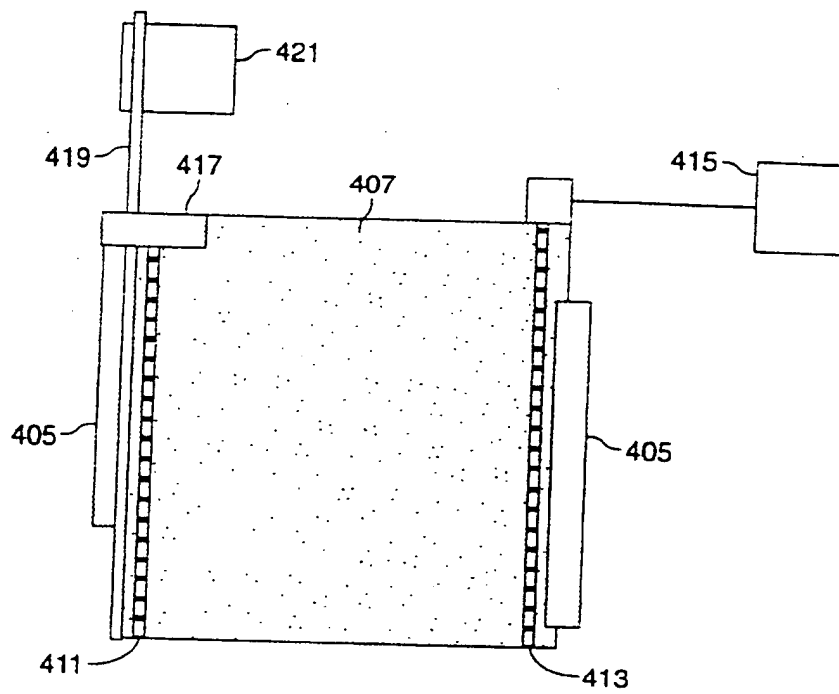


FIG. 5A

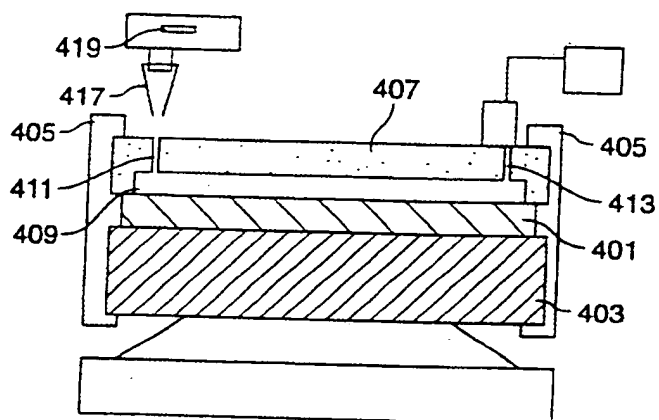


FIG. 5B

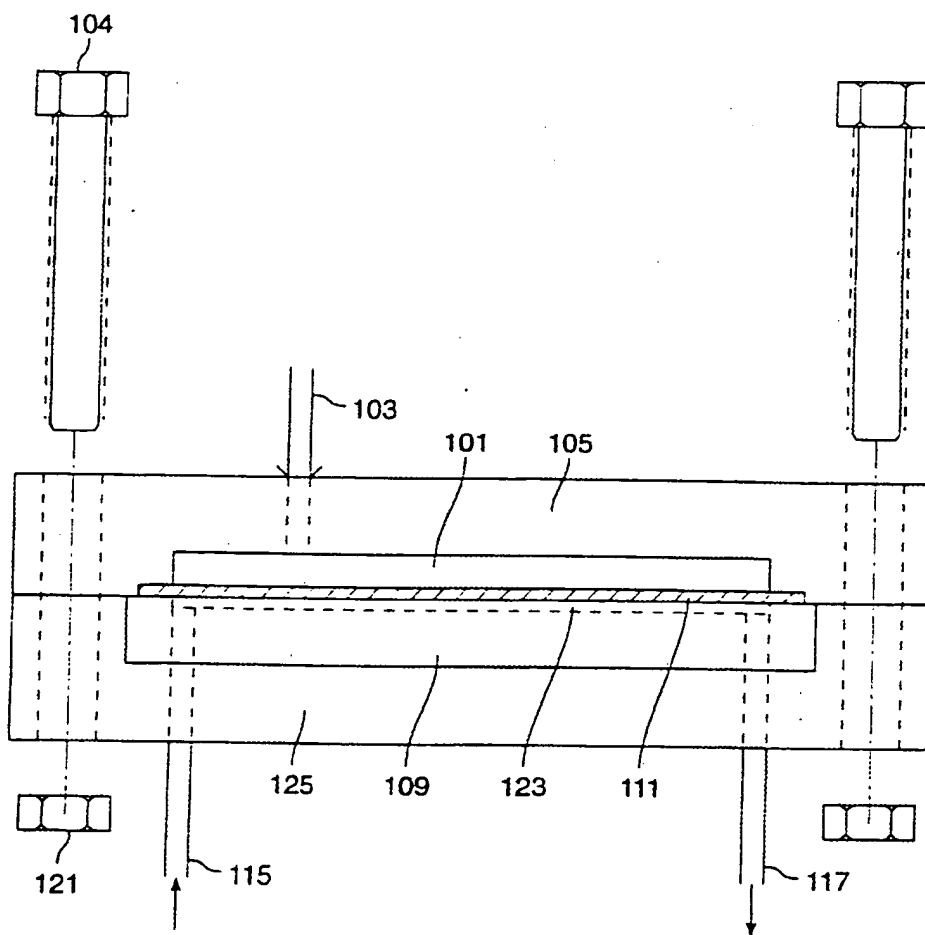


FIG. 6

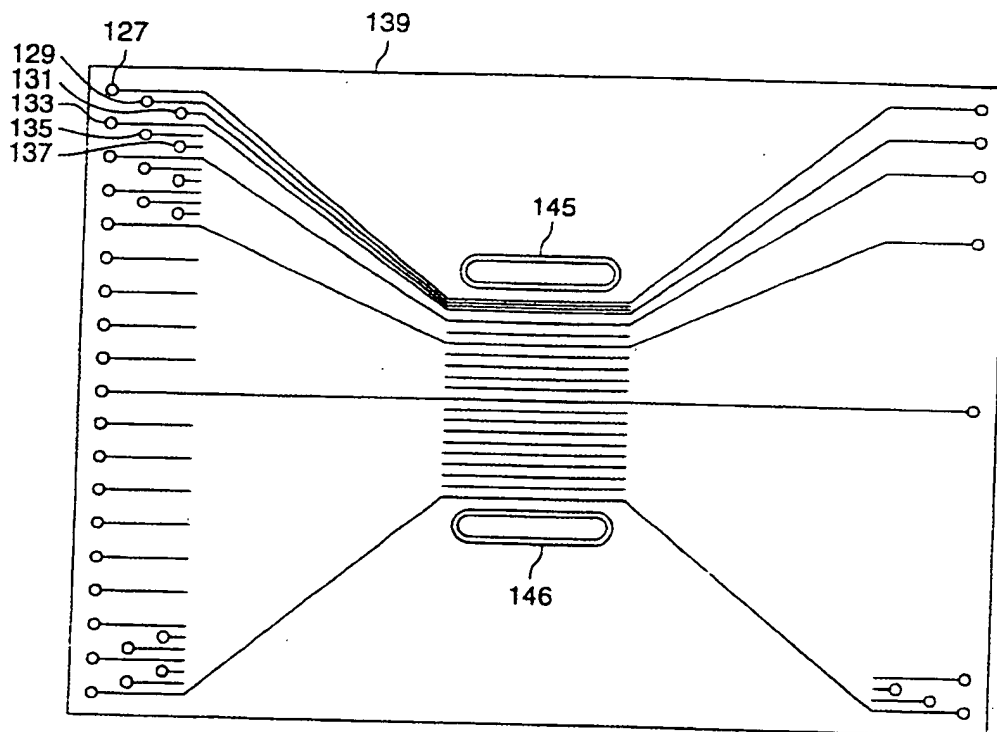


FIG. 7A

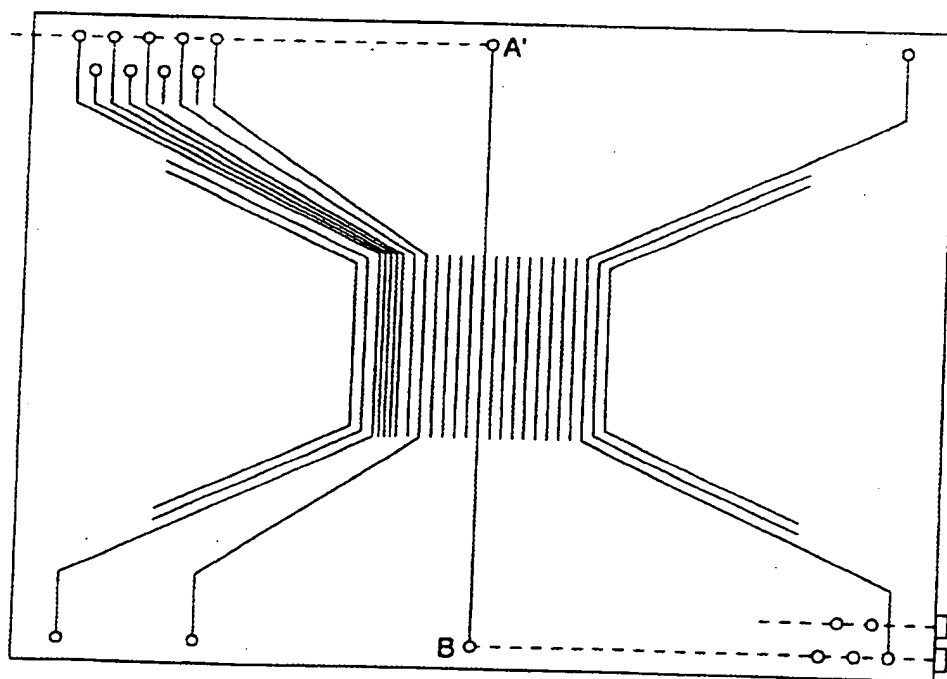


FIG. 7B

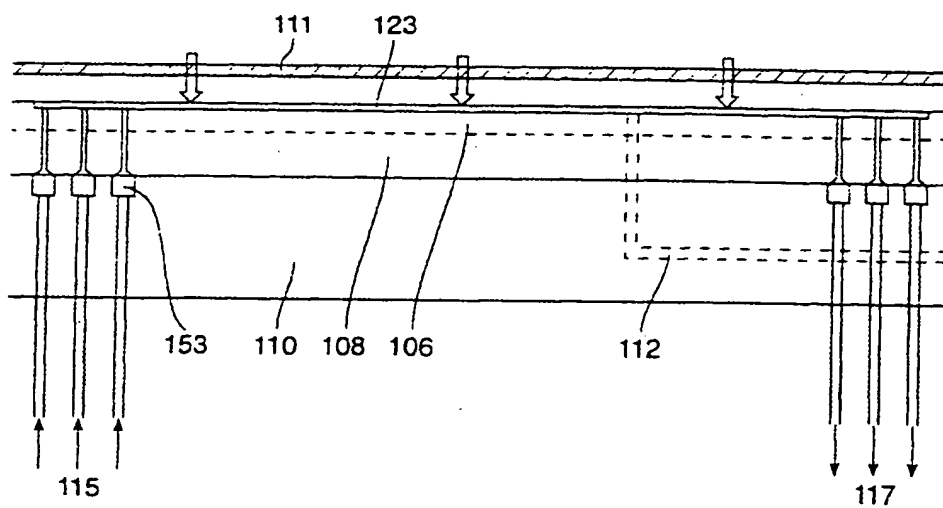


FIG. 8

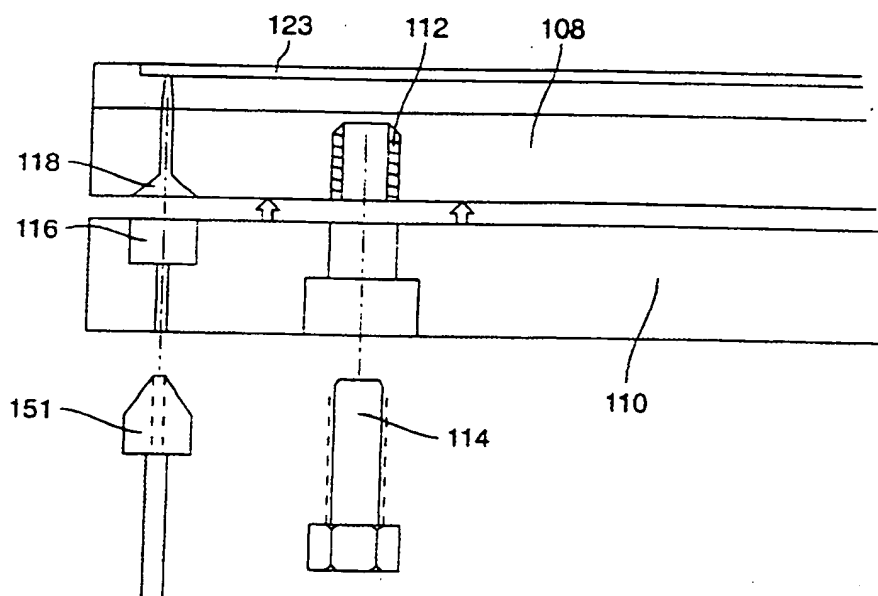


FIG. 9

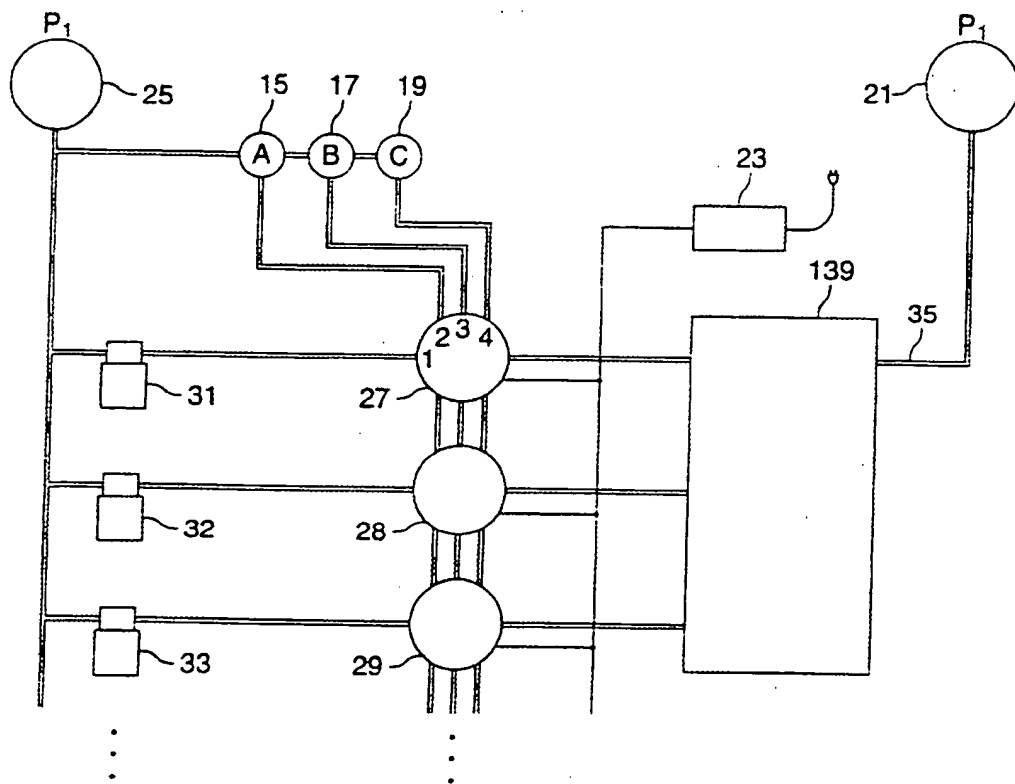


FIG. 10

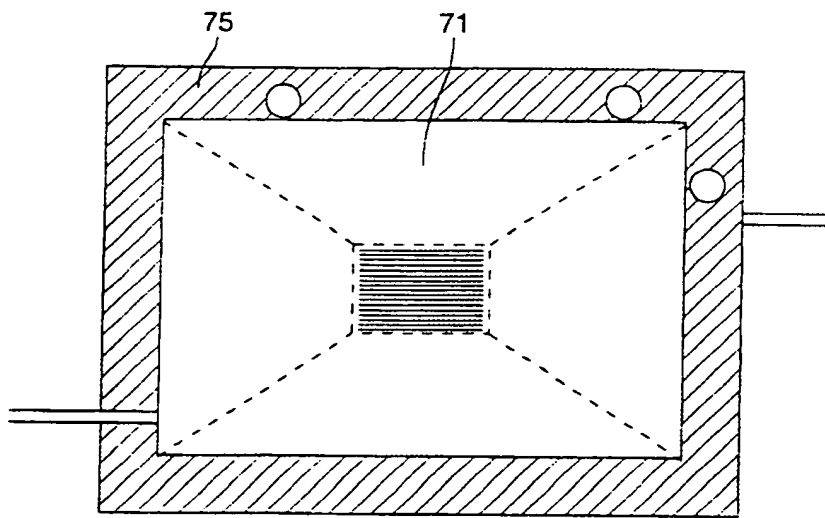


FIG. 11A

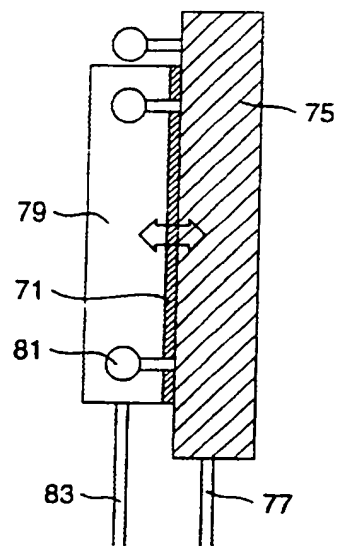


FIG. 11B

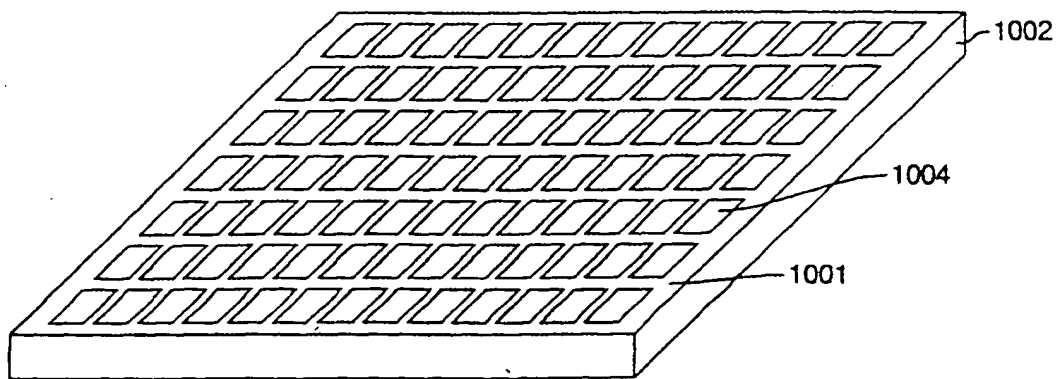
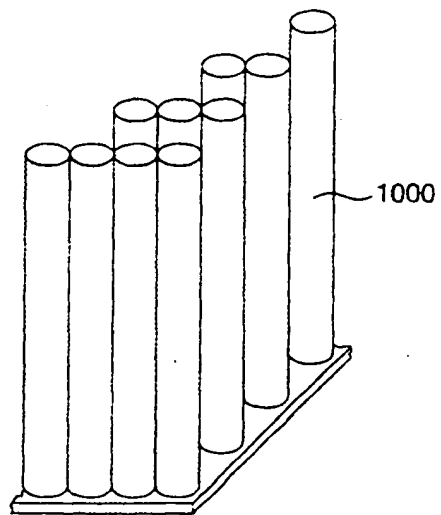


FIG. 12

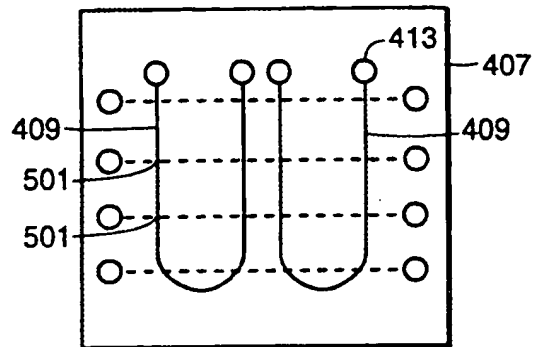


FIG. 13A

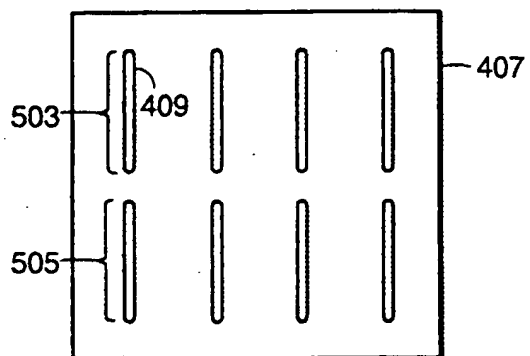


FIG. 13B

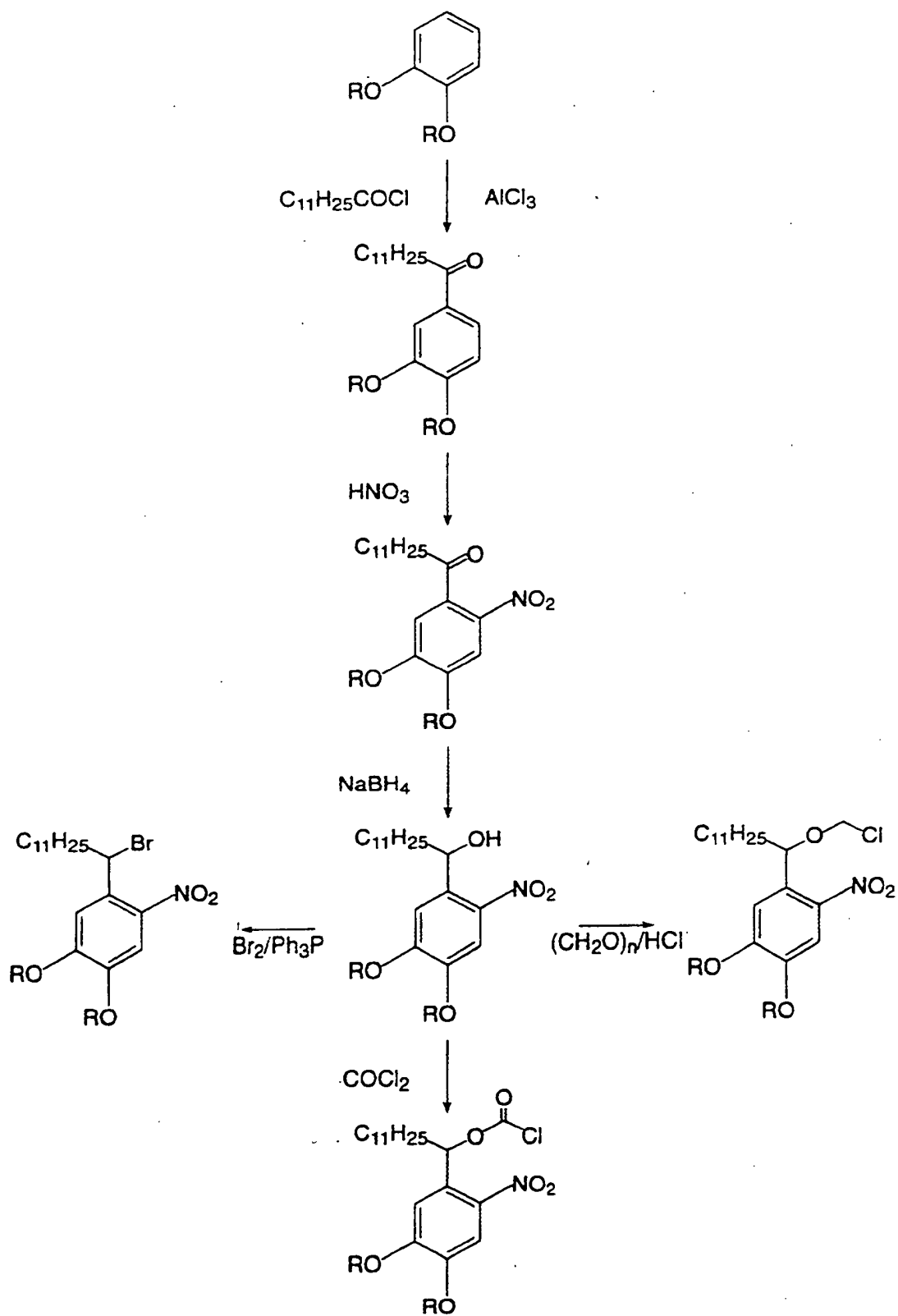


FIG. 14

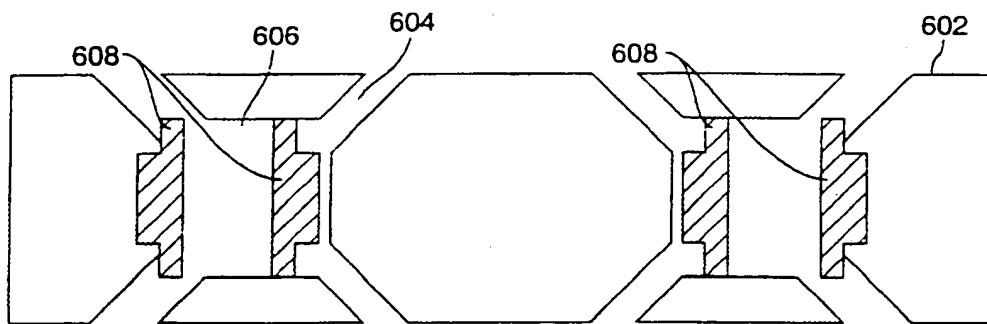


FIG. 15A

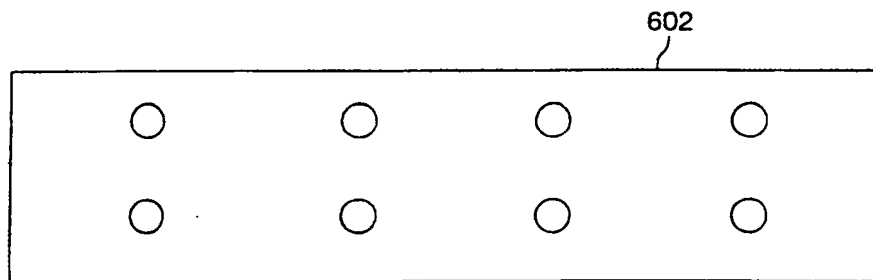


FIG. 15B

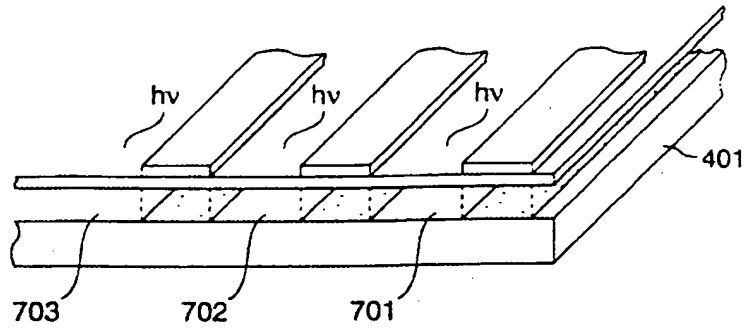


FIG. 16A

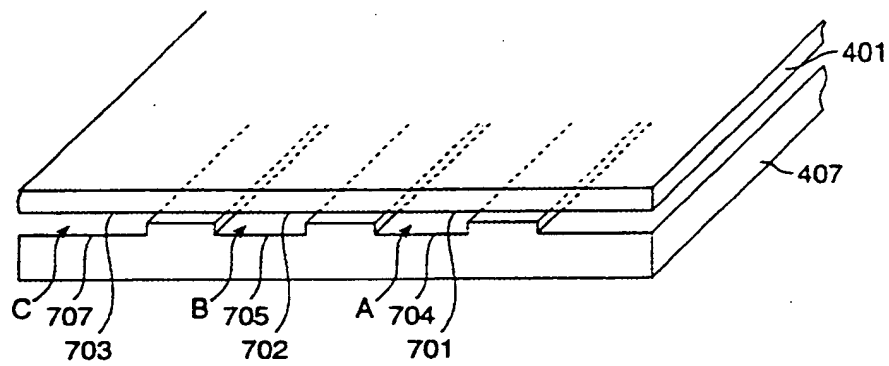


FIG. 16B

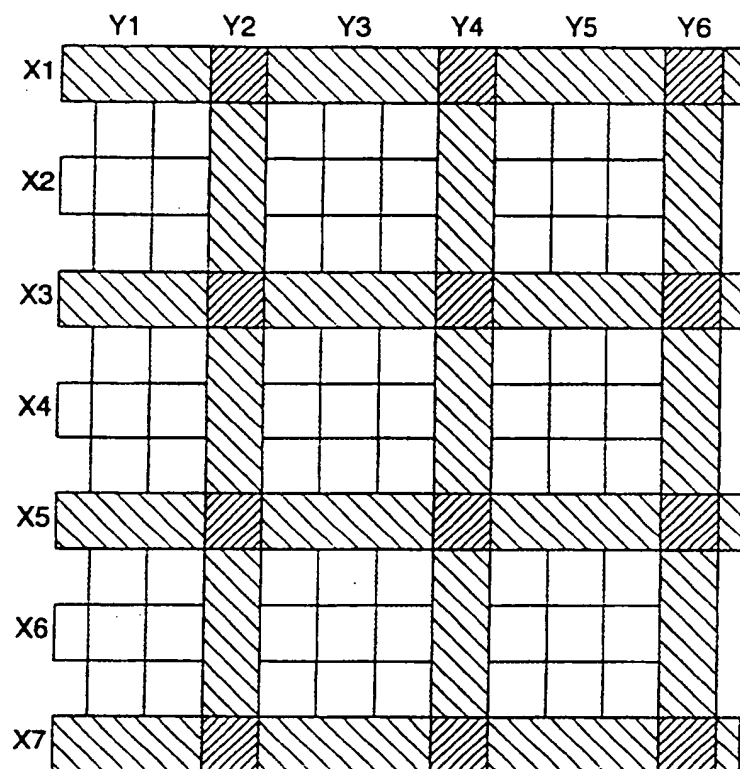


FIG. 17

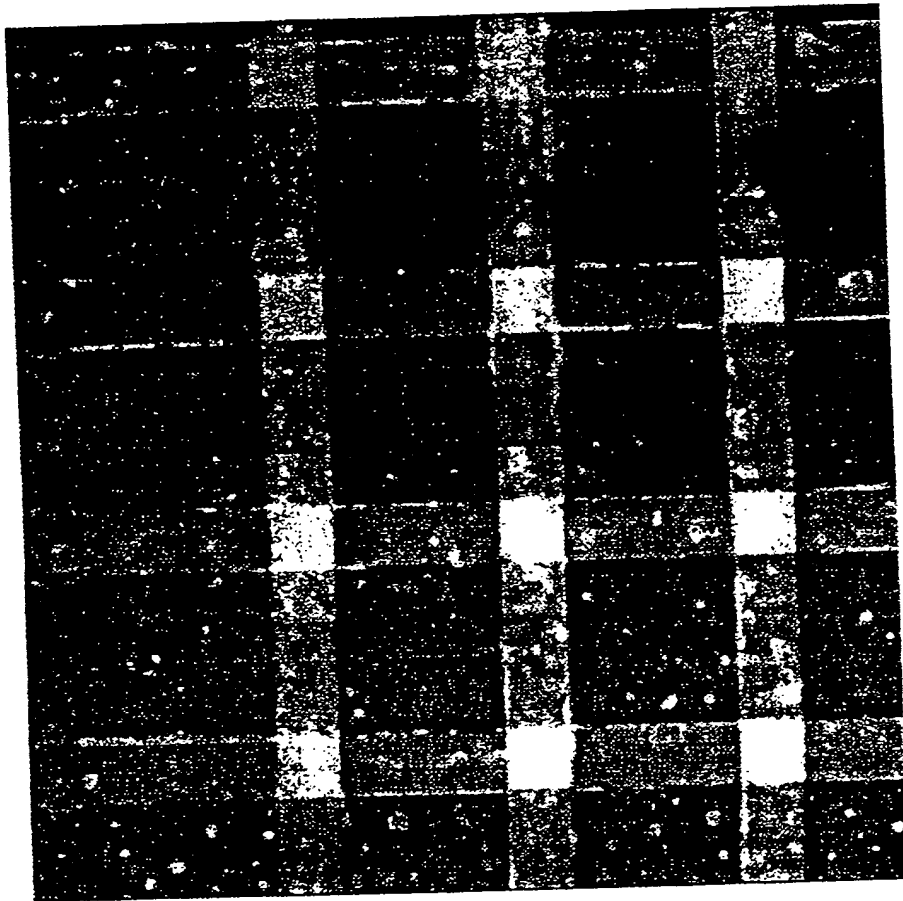


FIG. 18

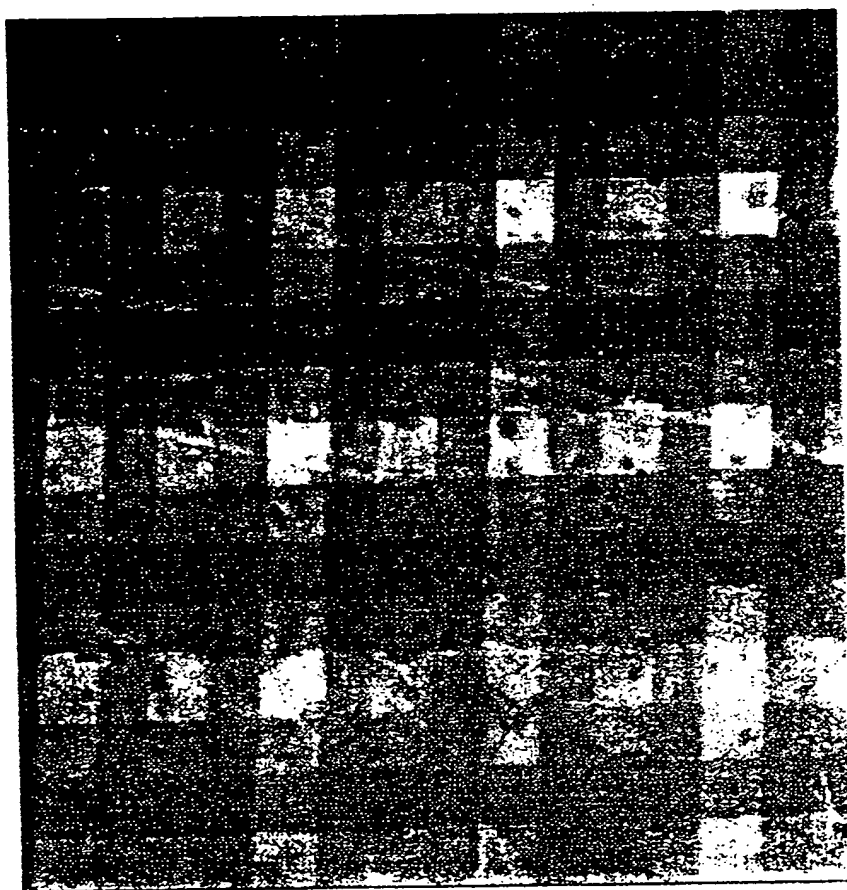


FIG. 19

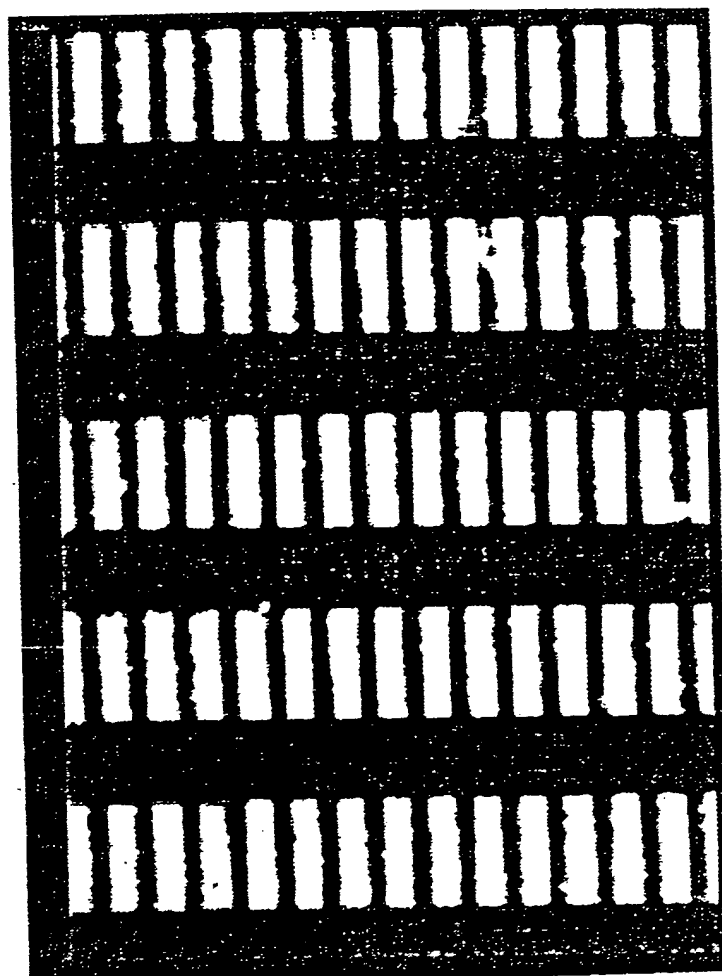


FIG. 20

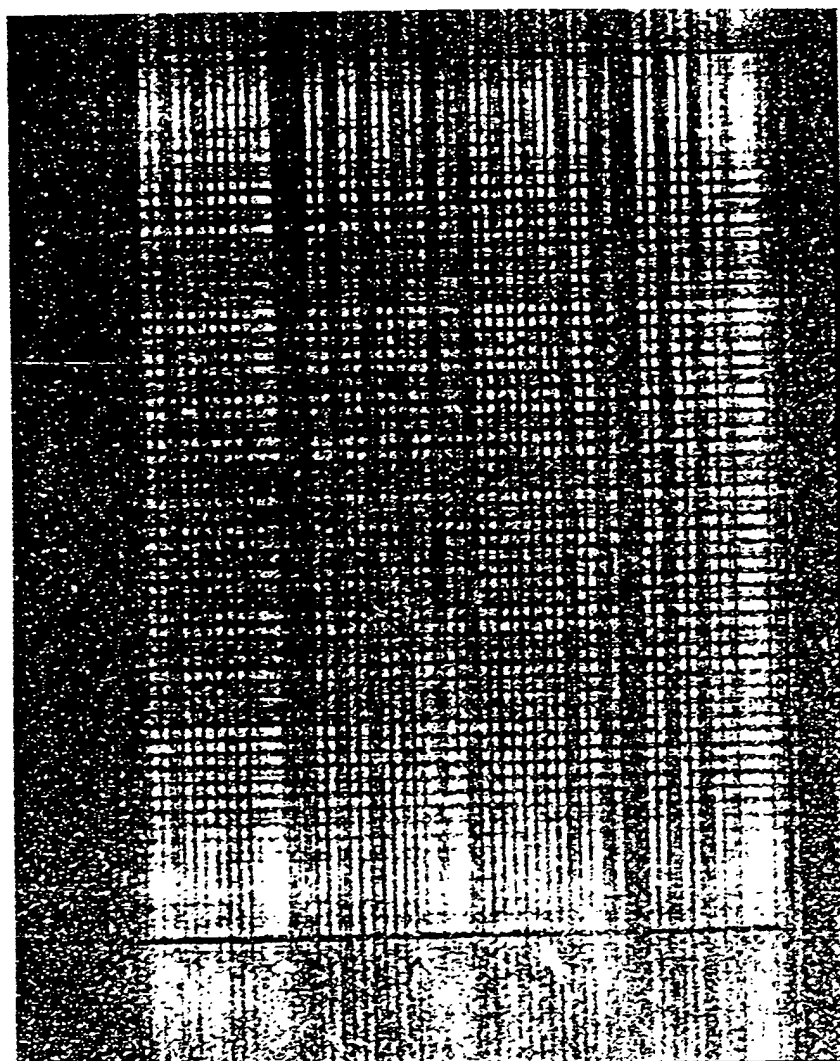


FIG. 21

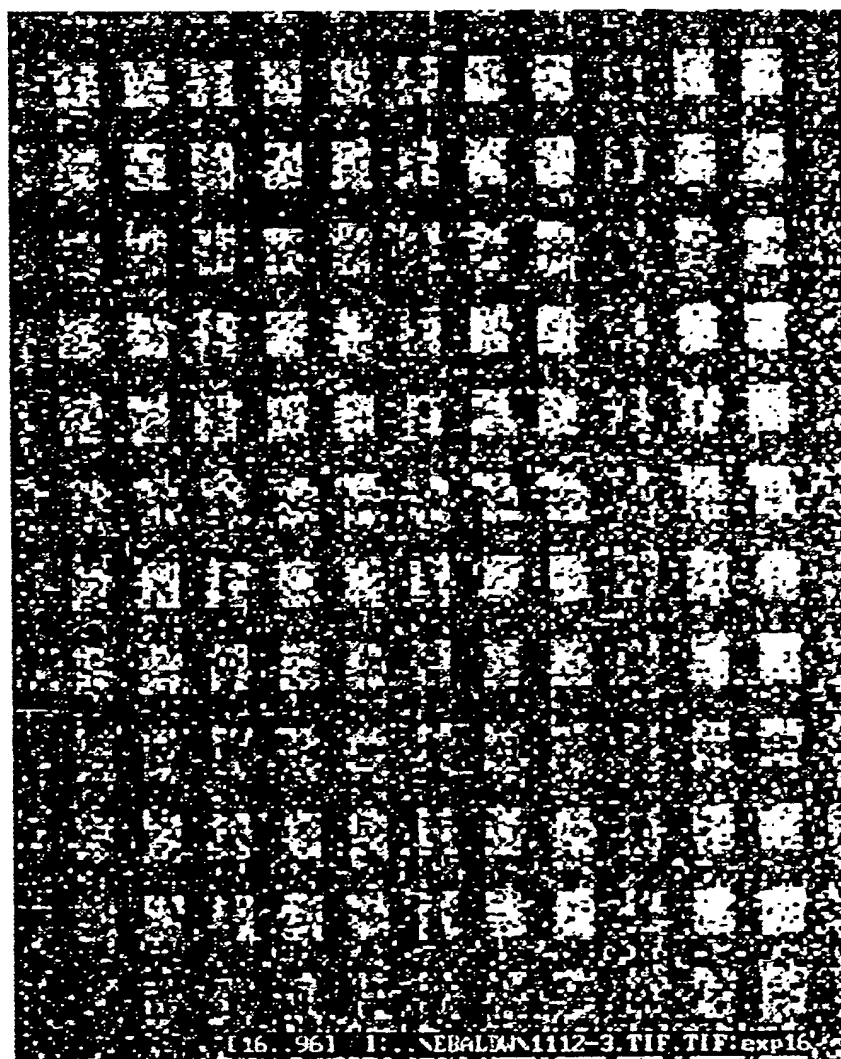


FIG. 22